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"Invaded."
"Swamped."

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About the Guide

The *Computerworld Buyer's Guide to Computer Systems* is a reference manual containing concise descriptions of computer system products and short profiles of the vendors selling these products.

The guide is divided into four major product sections — mainframes (Section A), superminicomputers (Section B); minicomputers/small business systems (Section C); and microcomputers (Section D). Each of these sections is preceded by a divider, with a fold-out tab identifying the product section.

Vendors are listed alphabetically within each section. Each vendor's products are also listed alphabetically.

In addition to the four product sections there is a separate vendor profile unit (Section V).

Appearing in the front of the guide is a magazine section with feature articles about the state of the industry, markets and technical information for specific product categories and issues related to computer systems.

Also featured in the guide is a vendor/product index, a price index and an advertiser's index. At the back of the guide there is a list of computer associations and user groups sorted by the location of these groups and a calendar of important events, listed by date through October of 1983.

DEFINTIONS

For purposes of this guide the following definitions apply:

Mainframe: A mainframe is a general purpose computer system that is usually priced from a low price of about $100,000 to upwards of several million dollars. These systems usually have a word length greater than 32-bits and an enormous amount of on-line storage. It requires special environmental conditions and is housed in a separate room.

Superminicomputer: Although smaller than a mainframe, the superminicomputer, also a general purpose system, often has a power range and price structure that overlaps that of a low-end mainframe. Generally superminis have a word-length of 32-bits. Although they are high-performance systems, they do not have the throughput of mainframes.

Minicomputers: These systems are generally distinguished by 16-bit architecture, although other word-lengths are also used. They are general purpose in nature, but can also be sold as tools or as a packaged solution. They can operate effectively as small business systems or distributed processors.

Small Business Systems: These units, built around either minicomputer or microcomputer architecture, are generally marketed to smaller businesses and are often sold with packaged application software.

Microcomputers: This categoty of products is diverse, generally encompassing systems built around 8-bit or 16-bit architecture with varying power capability. Included within the microcomputer tab are standard microcomputers, high-end supermicros, personal computers, desktop computers, hand-held computers, and portable computers.

PRODUCT LISTINGS Specific product listings in the *Computerworld Buyer's Guide to Computer Systems* contain details about the product's operating system, word length, languages supported, minimum and maximum memory capacity, maximum on-line storage, communications protocols supported, sales and maintenance information and, where possible, the number of units installed to date.

Each vendor's product listing also contains a cross reference directing the reader to the appropriate page for the vendor's company profile.

The prices of computer systems listed in this guide generally span a range. This range is comprised of the price of a small configuration of the vendor's product and the price of a large configuration of the product. A configuration consists of the processor, an on-line storage device, a hard-copy device, a terminal and a tape or other backup storage device where appropriate.

If vendors did not provide a price range for their systems the price shown in the product listing is the price for an average or medium or small or large configuration.

The maintenance fees shown in the products listing are monthly fees.

COMPUTER CONSOLES, INC.
POWER 5/20
Mini
Specific Application: Transaction Processing
Word Length: 16-bit
Operating System: PERPOS
Languages Supported: Cobol, Fortran, Basic, C
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 210M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $28,000
Maintenance: On-site
Date First Installed: July 1982
(See Vendor Profile Page V-5)

About the Guide

COMPANY PROFILES The company profile section of the *Computerworld Buyer's Guide to Computer Systems* contains each vendor's address and telephone number as well as a listing of key management, marketing and/or technical personnel within the firm. In addition, the profile includes the company's target markets, revenue, and geographic market coverage, among other details.

Note: Vendors were offered the option of placing their company name in a larger type-face than the standard listing size. Vendors were also offered the opportunity to add a boxed insert at the the end of their listing. These options were paid for by the vendors and should in no way be construed as an endorsement of these companies or products by the publishers of the *Computerworld Buyer's Guide to Computer Systems.*

PERKIN-ELMER CORP.
Data Systems Group
2 Crescent Place
Oceanport, NJ 07757
(201) 870-4712
Major Market: Computer Manufacturing
Target Industries: Financial; Scientific; Geophysical; Aerospace and Weapons
Target Applications: CAD/CAM; Simulation
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: B. Rosenbaum
Head of Sales: James K. Sims
Head of Software/Engineering: David I. Caplan
Head of Customer Service: Joseph Rechner
Geographic Coverage: International
Year Established: 1966
Number of Employees: 2,000

VENDOR/ PRODUCT INDEX The vendor/product index provides a quick glimpse of specific vendors and products featured in the guide. The index is arranged alphabetically by vendor, followed by the name of each product listed in the product section of the guide. A section and page number follows each product name to allow the reader to easily find the products he or she is interested in learning about.

An excerpt from this index is shown below.

Accelerated Data Systems	100	B-1
	200	B-1
	300	B-1
	400	B-1
Access Matrix Corp.	ACCESS COMPUTER	D-1
Action Computer Enterprise	DISCOVERY 500	D-1
	DISCOVERY 1600	D-1
Action Instruments Co., Inc.	BC 2	D-1
Actu Systems	CPU 3000	D-1
	POS 15	D-1

PRICE INDEX A price index is featured in the *Computerworld Buyer's Guide to Computer Systems* to give readers a simplified view of the cost of specific products. The price index is divided into 10 ranges, with vendors listed alphabetically within each range, followed by the specific system and its price and a page notation. If a reader has determined the approximate amount he or she is prepared to spend for a particular system, the price index provides a means of narrowing down the necessary prospects and thus eliminating unnecessary browsing in the product section of the guide.

Systems Under $5,000

Access Matrix Corp.	ACCESS COMPUTER	$2,495	D-1
Action Instruments Co., Inc.	BC 2	$2,000	D-1
Advanced Digital Products, Inc.	PDQ-3	$2,995	D-1
	PDQ-23	$3,000	D-1
Advanced Informatics, Ltd.	INFORMER II	$1,500	D-1
	INFORMER III	$2,500	D-1
Advanced Micro Digital Corp.	SUPERQUAD	$2,200	D-2
	SUPERSLAVE	$2,200	D-2
	SUPERSYSTEM	$2,300	D-2
Aloyon, Inc.	A68KPM	$3,000	C-1

Editor's Note

The *Computerworld Buyer's Guide to Computer Systems* is the premiere issue of a series of market specific reference guides that will be published on a regular basis throughout the year.

During 1983, in addition to the computer systems guide, *Computerworld* will also publish a *Buyer's Guide to Terminals & Peripherals* in early October and a *Buyer's Guide to Software* that will appear in late November. Other volumes covering additional specific markets will appear in 1984.

These volumes will also be updated on a regular basis, some annually and others more frequently.

The idea behind the guides is to help *Computerworld* readers make informed purchasing decisions about the mind-boggling array of computer and computer-related products in the marketplace today. One way of doing this is to compile a comprehensive reference manual to vendors and their products that enables readers to obtain a quick, capsulized view of the products and vendors to be found in the dynamic computer industry. Because each volume of the Buyer's Guide series is limited to a specific product category, readers can conveniently look up information without having to plow through unwieldy directories. In addition, the guides will contain a variety of indices which make the process of finding information even easier.

And, unlike other guides, the *Computerworld* Buyer's Guide series also has a special magazine section at the beginning of the volume, which features articles by experts on a variety of technological and industry issues related to the specific topic of the guide. The magazine is designed to give readers a perspective on the current and future state of the market for specific products and the vendors of those products, profile state-of-the-art technologies to give a view of what directions products are heading in the future and to provide a new way of thinking about information processing.

The Buyer's Guide series is another service *Computerworld* offers to its readers as part of their subscription. Currently, the guides will be sent to our more than 110,000 domestic subscribers.

Compiling these Buyer's Guides is a complicated process. To achieve this, we have enlisted the services of International Data Corp., a well-known computer industry market research firm. To capture the data needed for the Buyer's Guides, IDC established the Enterprise File, a data base containing information on the companies that produce or provide computer-related products and services.

The project was started in April 1982 and is a complement to IDC's Data File, a comprehensive data base of end-user facilities.

Information for the Enterprise File is gathered and updated regularly by IDC through printed questionnaires and telephone surveys. To date, the file has records on nearly 12,000 companies and is expects to have 35,000 to 40,000 product entries for inclusion in the file in the near future.

Marcia Blumenthal

Marcia Blumenthal, Editor

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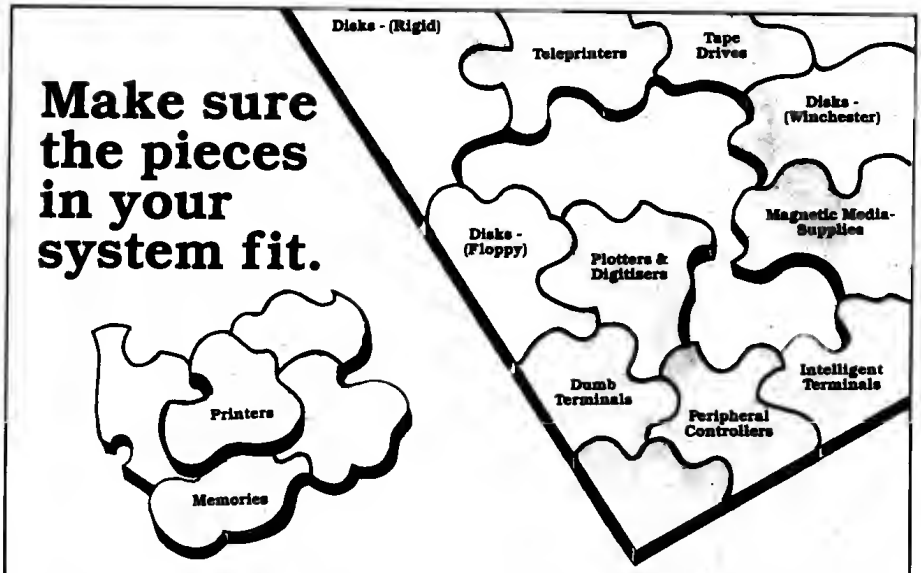
ILLUSTRATION BY JOHN KURDY

LADIES & GENTLEMEN...

. . . The computer industry is vibrant and flourishing and shows no signs of slowing down. Evolving technology constantly provides new applications for computer systems. The stories on the following pages discuss the latest technological developments and industry trends in the three major hardware sectors — mainframes, minicomputers and microcomputers.



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The *Computerworld Buyer's Guide to Terminals & Peripherals* is the second in our buyer's guide series and provides detailed, all-inclusive listings and in-depth purchase decision information that DP professionals need as this market continues to grow. Listings are divided into two sections: complete product listings and vendor profiles. Product listings include name and model number, operating system environment, number of installations, delivery and price data, etc. Vendor profiles include company name, address, contact information, primary markets served and more. Tab dividers separate each category and cross references add to ease-of-use.

Buyers will refer to *Computerworld Buyer's Guide to Terminals & Peripherals* again and again for vital purchasing information. And advertisers will find this guide a powerful vehicle for telling their story to *Computerworld* subscribers at that crucial moment when they are actively seeking vendors.

The issue date for the *Computerworld Buyer's Guides to Terminals & Peripherals* is October 5.

The *Computerworld Buyer's Guides* are sent exclusively to the more than 111,000 *Computerworld* subscribers in the U.S. One more good reason to subscribe to *Computerworld*.

For more information on the *Computerworld Buyer's Guides*, call Kevin McPherson at (617) 879-0700 or your local *Computerworld* sales representative.

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Giving Old Strength New Weight

By Frederic G. Withington

The latest personal computers and superminis have exhibited amazing price/performance characteristics and promise to get better. Because most mainframes offer less computing performance per dollar than these units, some people conclude mainframes are becoming obsolete. This is a myth. There are at least three major information processing functions mainframes will continue to dominate — indefinitely.

Batch Production. High volume, periodic batch applications were the first uses for business computers, and they will continue to exist. Payrolls must be prepared periodically for thousands of employees; invoices must be prepared for thousands (even millions) of customers; welfare checks must be prepared for millions of recipients.

The systems needed for these tasks are more mechanical than electronic: multiple high-speed printers, farms of disks and tapes and clusters of data entry terminals must be kept humming.

The control computers required must emphasize device control, interrupt structures and complex control software. These add to system cost and overhead without contributing to computing speed, so batch production mainframes can be expected to have relatively low computing speed per dollar — but will always be needed.

Number Crunching. There continue to be problems that require more computing power than any supermini can deliver (the National Weather Service, for instance, wants supercomputers with 1,000 times the power currently available). Supercomputers will remain expensive so they must be shared. They also have I/O and file processing needs. They are therefore specialized versions of main-

frames. However, they are becoming modular. Increasingly common are specialized vector or array processor modules (whose computing performance per dollar is far beyond that of superminis, though only for limited application) which are connected to modest mainframes.

Data Base Management. Some data bases need to be managed centrally, because updates may come from many points in the network. Methods exist to synchronize distributed copies of data bases, but so far users have generally judged them impractical.

Systems oriented to data base management have some of the characteristics of batch systems (complex device-control function), but also require a tremendous amount of power to interpret queries, process indices, unblock data and so on.

The recent proliferation of personal computers and superminis has fostered the growth of data-base-oriented applications, and therefore of central mainframes with ever-increasing power to manage them. Growth will continue, particularly as text, image and digitized voice information begins to be added to data bases.

The mainframe will live, then, but it cannot be expected to have market growth as dynamic as that of personal computers or superminis. While the value of personal computer shipments is forecast to grow at a compound annual rate of 35% from 1981 to 1986 and the value of minicomputer shipments will grow at 20%, the compound annual dollar value growth of mainframes will be only 7%.

Recognizing this sluggish dollar value growth in mainframe shipments, mainframers are becoming increasingly active in the low-end system market.

One reason for this slow growth is the declining cost of electronic components; as a result of this, mainframe power will be met at relatively little increase in mainframe price.

A second and more imporant market limitation is "site saturation": a mainframe is already in place at almost every site that will have one in 1986. Therefore, growth can only be through upgrading.

This site saturation has also tended to freeze the competitive pattern. Most potential users of new mainframes have already had earlier models for some time and have invested in programs for them. These programs are manufacturer-specific, so the user must undergo a conversion to switch manufacturers. History shows that this happens only rarely. The incumbent manufacturer has a strong advantage when the user wants to change mainframes. IBM, Sperry Corp., Honeywell, Inc. and Burroughs Corp. know this well and have moved to exploit their advantages so any erosion of their customer bases will be slow.

Evolving technology may begin to melt the frozen competitive picture. Mainframes are becoming modular. Front-end communications processors have long been sold by specialized manufacturers to users of other manufacturers' mainframes.

But if history is a guide, the mainframe manufacturers will retain a substantial share of the market, but some innovative new companies are likely to capture a substantial share of the new market for specialized modules.

Other classes of modules are evolving that could be the province of specialists. They include:

Data Base Processors. These processors will be of many types, ranging from data base management systems offering extremely fast response for limited purposes (such as for airline reservation systems) to specialized text and graphic file servers designed for information retrieval and support of office information processing. Improvements expected in magnetic and optical disks will enhance the attractiveness of these office file servers. Britton-Lee, Inc. and International Computers, Ltd. are already active in the market.

Expert Systems. Also called knowledge-based systems, these are designed to help users in specific professional categories (such as financial analysis and medical diagnosis) to define problems, learn methods of finding solutions and then apply the solutions.

Processing software and data bases for expert systems contain the experience and knowledge of specialists in the field. Machine designs for expert systems may diverge from those for conventional computers, because they must often manipulate concepts and symbols rather than numbers, process relationships rather than sequential computational steps and have very large memories available. They may therefore take the form of specialized, time-shared modules accessed through general-purpose mainframes. Xerox Corp. and Symbolics, Inc. offer list language processors for research in expert systems.

Large-Scale Simulators. Today's supercomputers are often used to simulate the behavior of nuclear reactors and other large-scale complex systems. It is possible that very large arrays of microcomputers might be of use to form models of such systems, improving the precision of the simulations.

Clearly there is room for manufacturers of specialized modules in each of these market areas. These modules can be attached to future general-purpose mainframes of whatever design, either through a channel, bus or local-area network hookup. Equally clearly, the mainframe manufacturers are aware of these potentials and are doing their own homework.

The technology of specialized modules may then lead to a rejuvenation of the mainframe market. Even without it, however, the mainframe is far from obsolete.□

Withington is a vice-president at Arthur D. Little, Inc. in Cambridge, Mass. Withington also directs the firm's annual series of information processing industry studies.

Superminis Step Ahead

Finding Balance In The Mini Market

By Robert W. Hauserman

Although some analysts have been accused of prematurely predicting the demise of the conventional 16-bit minicomputer for several years, recent trends suggest the 32-bit supermini will virtually become the "traditional" minicomputer by the late 1980s.

By the middle of 1982 there were more than 55 superminis available on the market from 19 vendors. With a predicted growth rate of approximately 56% each year through 1985, the 32-bit supermini now represents the fastest growing segment of a thriving minicomputer market.

According to International Data Corp. projections, superminis will comprise about 41.4% of total unit minicomputer shipments by 1986, up from 38.6% of the units shipments last year.

Originally directed at scientific number-crunching and real-time control applications, superminis continue to gain acceptance in conventional data processing applications as well, with many analysts predicting the commercial

sector will grow by as much as 40% each year.

The supermini features a longer word length, which leads to increased throughput, more precise computations and easier program development.

The advantages of superminis over the traditional 16-bit machine are a direct result of their extended word lengths. The maximum number of storage locations that can be directly addressed by the 16-bit word is only 2^{16} or 65,536. A 32-bit address, however, can specify up to 2^{32}, or 4.29 billion distinct storage locations; therefore, the longer word length significantly expands a system's direct addressing capabilities, permitting effective use of the large physical main storage capacities that characterize most of the superminis.

A single 32-bit word provides enough precision to satisfy the demands of scientific and commercial computations, and most superminis are capable of processing double-precision (64-bit) operands. The common 16-bit minicomputer word length, however, is too short to provide the required precision in many applications, necessitating the use of time-consuming multiple-word operations.

Finally, a 32-bit supermini normally transfers twice as much information to or from main storage during each cycle as a 16-bit mini. This inherent performance advantage is further enhanced in many cases through the use of storage interleaving, cache memories and other power-boosting features.

Because it is based on minicomputer architecture, the supermini is more conducive to a multiuser, interactive processing environment than many mainframes are. They are in most cases easier to use, usually do not require special environmental conditions and generally require less power.

Superminis are being marketed for — and finding widespread user acceptance in — a broad spectrum of applications. Applications for superminis now fall into three broad categories: scientific/technical, commercial and combinations

Selected 32-Bit Minicomputer Systems

Manufacturer and Model	Apollo Computer, Inc. DN420, DN600	Data General Corp. MV/Family	Digital Equipment Corp. VAX-11	Formation, Inc. 4000
Workstations Supported	200	64 to 192	24 to 112	96
Memory Capacity (Bytes)	512K to 3.5M	1M to 16M	1M to 12M	256K to 8M
Virtual Memory	Standard	Standard	Standard	Standard
Maximum Program Size (Bytes)	16M	512M	2G	16M
Parity Checking	N/A	No	No	Standard
No. of Instructions	65	467	244	IBM/370 Inst. Set
Cache Memory (Bytes)	Optional 4K	16K	8K (11/780)	No
Maximum Communications Lines	3	192	112	100
Price of CPU, Power Supply, Cabinet & Minimum Memory	$28,900	$56,300 to $211,000	$48,900 to $495,000	$50,300
Date of First Delivery	3/81	10/80	2/78	8/80
No. Installed to Date	500	300	Over 2000	50
Applications Software Availability		Present, Trendview, Manap and CEO Electronic Office	Primarily Third-Party Software	IBM/370 Software-Compatible

Charts. Courtesy of Datapro Research Corp.

of the two.

Commercial applications include distributed processing networks, off loading of applications from large batch-oriented data centers and installations where large numbers of users must be supported simultaneously. In mixed technical and commercial environments the superminis are used for a wide range of interactive applications as well as for operations research functions that can help an organization improve its operations, allocate its resources and sharpen its decisions.

While initially aimed at the scientific and technical markets, current trends indicate the biggest push by supermini vendors during this decade will be in the area of business data processing, threatening the supremacy of the Digital Equipment Corp. 16-bit PDP-11 and Data General Corp. Eclipse families. A manifestation of this trend is that DEC's high-end 16-bit workhorse, the PDP-11/70, is no longer actively marketed.

Vendors are becoming increasingly aware that the business community is interested in machines that are cheaper than mainframes, yet at the same time offer large increases in processing power.

The shift away from the scientific and technical markets toward the commercial sector is apparent: superminis are price/performance competitive with small mainframes. They allow users previously limited to time-sharing environments (because of a big mainframe price-tag) to afford an in-house system and they are more agreeable to multiuser and interactive environments.

Another indication of this trend is that in the last 15 months or so, the major supermini vendors have generally extended their product lines downward, clearly moving into the domain of the high-end 16-bit minis. After the introduction of the Eclipse MV/8000 in 1980, DG followed up with the MV/6000 at the end of 1981, and the MV/4000 at the end of 1982.

DEC followed a similar path after the introduction of the VAX-

Gould, Inc. Concept/32	Honeywell, Inc. DPS 6	NCR Corp. I-9000	Perkin-Elmer Corp. 3200	Prime Computer, Inc. 50 Series	Wang Laboratories, Inc. VS Series
96	64 to 112	Over 20	32 to 128	32 to 128	48 to 128
256K to 16M	1M to 16M	1M to 4M	512K to 16M	512K to 8M	1M to 8M
N/A	No	Standard	No	Standard	Standard
16M	—	N/A	16M	32M	1M
Standard	Standard	Standard	No	Standard	Standard
214 (maximum)	237	—	206 Standard, 52 Optional	Over 500	180
Standard 64K/128K	8K	—	8K	Standard 32K	32K
64	112	20	63	128	Application Dependent
$33,000 to $330,000	$110,000 to $130,000	$52,100	$42,000 to $185,000	$48,500 to $295,000	$73,000
10/78	1981	6/81	1981	1979	12/80
2,270	220	—	1,433	4,610	—
Limited: Primarily Development Tools	Office Automation, Business System, Manufacturing System	Several Packages for Banking, Education, Hospitals and Hotels	Technical In Nature; Available Through Users' Groups	CAD/CAM, Management, Third-Party Software	Third-Party Support

Charts: Courtesy of Datapro Research Corp.

11/780 in 1977, with the 11/750 in 1980 and the 11/730 in 1982, which presents a formidable challenge to both the high-end of the 16-bit mini line and the low-end mainframes.

Prime Computer, Inc.'s 32-bit product line has expanded to include a range of business and scientifically oriented, multiuser, interactive systems that, similarly to DEC's and DG's lines, present significant competition to high-end mini and low-end mainframe vendors. Current Prime strategies include maintaining compatibility with competitive architectures and a continuing commitment to both office automation and development of third-party vertical industry applications software packages.

Wang Laboratories, Inc.'s VS family includes seven systems that offer an equally wide range of capacities and speeds. The low-eod VS 25 and VS 45 systems are targeted at small- or medium-size companies or for department-level processing and remote facilities of larger organizations, particularly offices staffed with 10 to 100 people. The high-end VS 90 and VS 100 systems are targeted to handle DDP and office automation requirements of large corporations.

Despite the move into the low-end 32-bit minicomputer sector, which is suitable for commercial applications, vendors are also forging ahead with high-end announcements. DG recently announced its MV/10000 and it is rumored that DEC has a VAX-11/790 in the wings, which will attempt to erode DG's current prominent position in this market niche.

With a base configuration of 1M byte of memory (expandable to 18M bytes), a 147M-byte disk, tape drive, 16-line multiplexors, console, AOS/VS operating system license, the capability of supporting as much as 18.5G bytes of disk storage, 256 simultaneous processes, 196 users and a list price of $204,100, the DG MV/10000 is clearly in the ballpark for a run at the low- and mid-range user mainframe. According to DG's benchmark for this product, it was two times as fast as the IBM 4341 Model Group 12 at one-third the price.

DG officials hope to carve a permanent position with the MV/10000, especially in the technical markets, which suggests that, despite their courting of the commercial sectors, supermini vendors are not prepared to abandon the technical market to the conventional mainframe.

The major supermini vendors, such as Formation, Inc., with their established IBM-compatible F4000 supermini line, are bracing for an assault on the low-end mainframe market in the same way as the MV/4000 and VAX-11/730 have chipped away at the high-end 16-bit systems.

Perhaps the two most recognizable trends within the supermini area lie in their cost effectiveness and software availability. Because the commercial segment is currently growing faster and offers a greater growth potential for the future than any other area of the 32-bit market, supermini vendors are hastening to provide the appropriate software tools to turn their systems into efficient business data processors. Prime already boasts a relatively strong complement of business-oriented software.

The availability of 32-bit software, however, will expand slowly because of the enormous investment needed by vendors to produce such programs and the time it takes to develop 32-bit software packages. Much of the software available today is based on the 16-bit architecture and therefore cannot take full advantage of the 32-bit computer's processing power.

The slow rate of software development is the reason the predicted demise of the 16-bit minicomputer is far from certain. If the fate of the PDP-11 family represents that of all 16-bit minis, then the minicomputer is, at least for the present, alive and well. It will take three to five years before there is a substantial amount of 32-bit software on the market.

Although DEC has recently dropped the high-end systems like the PDP-11/70 and 11/34, they seem to have concentrated on the lower end of the series with introductions like the Micro/PDP-11. With more software available for the PDP-11 line than any other system and more than 400 companies selling peripherals and add-on equipment for the series, it is certain the PDP-11 will be with us for several more years.

Finally, the end of the traditional 16-bit mini cannot happen until the price of 32-bit systems descend from their original and lofty $150,000-plus heights. However, during the past several months, this event has dramatically occurred.

Today, several systems, including the Eclipse MV/4000 with 1M byte of main memory and the VAX-11/730, offer working configurations in the $50,000 price range.

As the perceived value of the 32-bit word length has sparked demand for products incorporating this architecture, the cost of providing these capabilities continues to decline. The cost of integrated circuits decreases every year. Moreover, as denser chips with more capabilities become available, fewer chips are needed. The eventual reductions in costs and size filter through the system design, reducing circuit-board areas and the cost of cooling, cabinets, power supplies and so on.

With the 32-bit superminis descending in price so dramatically, how low can price/performance ratios decrease before they level out? Supermini prices average on the whole around $90,000. According to some analysts, the cost will drop annually by about 15% for the next two to three years, leveling off somewhere between $40,000 to $50,000. The supermini then will truly have become the "traditional" minicomputer of the '80s.o

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The Explosion Continues

By Everett T. Meserve

While the mainframe computer is moving towards maturity and the minicomputer is approaching middle-aged status, the microcomputer is still a mere flowering youth.

Despite its youthful and glamorous position in the marketplace, it is becoming evident that the microcomputer industry will soon face a competitive shakedown. This shakedown will not be cataclysmic; it will instead occur as several major competitors corner a significant market-share position, leaving a smaller piece of the pie available to a growing number of less powerful competitors. In addition, at some point in the not-too-distant future, the growth rate of the microcomputer market will begin to level off. A taste of this type of competitive situation occurred last year in the small business system market as demand for these systems slowed, partially as a result of a poor economy, resulting in disastrous results for at least six firms in this market.

As industry participants — hardware and software suppliers, software developers, investors, resellers and service providers — look toward that eventuality, it is critical to consider and understand one of the key industry trends that is redefining the competitive environment — the metamorphosis from stand-alone to integrated personal computing.

In the summer of 1977, Radio Shack, Commodore Business Machines, Inc. and Apple Computer, Inc. almost simultaneously announced products that distinguished themselves from many of their predecessors by low prices

and the integration of subsystems into one convenient unit. The microcomputer market took off and in the five years that followed another 100 to 150 microcomputer suppliers joined in to provide personal computing to business professionals, technical professionals, educators, small business managers and consumers.

The integrated personal workstation marketplace today is an embryonic business that will require another four to five years to reach its growth stage, but thereafter will grow dramatically.

The major focus of these suppliers has been to broaden the penetration and availability of microcomputers by introducing products with lower cost and expanded capabilities and by making available the all-important applications software that allows noncomputer professionals to justify and use personal computers. Since the summer of 1977 the keys to success have shifted from availability and hardware performance to market segmentation, application solutions and distribution.

The spread of micros to an estimated 800,000 business users has combined with other separate trends in office automation and integrated data communications to determine the foundation for the industry's growth for the next five to ten years.

During this upcoming period the competitive battle will continue to focus on the broad and diverse population of professional business users as they are drawn, encouraged, pushed and shoved toward the use of information technology to improve their professional productivity and to enhance their decision-making ability.

Tangible evidence of this competitive battle centers on the transition of microcomputers from individual, dedicated, stand-alone professional tools to system-integrated personal workstations.

The major market for today's desktop micros consist of the business and technical professionals working in large corporate organizations (who bought some 200,000 units in 1982). Many of these corporate professionals want to communicate via electronic mail and text communications networks, obtain data from corporate data bases for local manipulation, and secure information from public information sources.

While personal computers can provide this capability, they were designed primarily to operate as stand-alone, dedicated products The integrated personal workstation, however, is designed with significant communications capability (but can also function as a stand-alone). Integrated personal workstations can be linked to one another with local-area communication networks, as well as to other systems using telecommunications facilities.

They are equipped with software that combines office automation, communication, decision and management aids with information processing functions. Eventually they will handle graphics and voice media a well as data and text.

The metamorphosis of today's stand-alone personal computer into tomorrow's integrated personal workstation is being aided by recent software announcements and joint venture arrangements which facilitate the linking of this limited stand-alone device to the rich resources and information wealth of the corporate mainframe.

Some examples of this integration trend are Peachtree Software, Inc.'s Executive Peachpak mainframe-micro-link products announced last year; Tandy Corp.'s support of Datapoint Corp.'s Arcnet local-area network scheme; Visicorp's and Informatics General Corp.'s announcement to link VisiAnswer with Informatics' Answer/DB software; and Cullinet Software, Inc.'s introduction of its Information Database which will link its data base system with the IBM Personal Computer and eventually with Apple Computer, Inc.'s Lisa system.

The significance of these early products linking mainframes to micros is to break the logjam created by an inability of personal computers to communicate with a centralized processor in a compatible format.

These moves are the first implementation of opening the door between local stand-alone computing capabilities and centralized information resources. This strategy will continue to be enhanced regularly during the next five years.

While it is convenient to view the integrated personal workstation as a technological offshoot of stand-alooe microcomputers, extended application software and communications capability will eventually differentiate them.

Inadequate integrated applications software, limited communications infrastructures and evolving system architecture will constrain the early growth of integrated personal workstations for a few years. However, by 1990 workstations will be broadly used.

One of the major changes also necessary for integrating the personal computer into the corporate information processing structure is the transformation of the mainframe architecture into compartmentalized, specialized processors. Such processors include a data base processor, communications processor and file server processor, all controlled by the supervisory processor. These changes will provide the required throughput demanded by personal workstation users because it parcels out the jobs traditionally done by one processor into several discrete processors.

The changing complexion of the microcomputer market also creates important new keys to business success for vendors as they offer products that provide

stand-alone performance vs. network operation, individual vs. integrated software and product vs. system marketing.

In an attempt to position themselves for success in the frothy integrated personal workstation environment, many vendors are increasingly entering into a variety of joint ventures. Joint ventures help spread the risk for vendors. These arrangements buy time and allow vendors to keep their technology current in a marketplace that is running at five times the speed of the the historic computer market.

What does this scenario of industry evolution forecast for market growth? Today's original-purchase microcomputer hardware and software market in the U.S. is approximately $2.9 billion. By 1987 it is expected to be near $10 billion.

As integrated personal workstations enter their growth phase (1985-1987) they will strongly compete with stand-alone desktop microcomputers. The result will be a maturing of the stand-alone microcomputer market, a market which will be only slightly larger in the early 1990s than it will be in the late 1980s.

The integrated personal workstation marketplace today is an embryonic business that will require another four to five years to reach its growth stage, but thereafter will grow dramatically, reaching $3 billion by 1987 and approximately $10 billion by 1992. At that point the size of the stand-alone microcomputer and integrated workstation markets will be equal.

This growth will require that files of data, text and graphics material be available to untrained users in a convenient manner; that communications facilities with appropriate bandwidth exist not only in the office but also between the office and other corporate networks, public information and central processing points; and that a wide variety of easy-to-use integrated software packages for manipulating data, text, graphics and voice be available. Also, prices must decline; the present embryonic products at $10,000 should cost no more than $5,000, and less capable versions may very well cost in the $1,000 to $3,000 range.

The marketplace for future professional micros and integrated personal workstations is critical to the futures of several groups of competitors. Companies seeking new business growth see the large potential user population — more than seven million managers and administrators in U.S. organizations — as an opportunity to provide new technology solutions for increasing professional productivity and responsiveness.

Desktop microcomputer vendors, who already have many business customers, see the integrated personal workstations as an extension of their own current offerings in the marketplace.

Terminal, computer and office product suppliers experiencing diminished business growth due to industry maturity see the potential for renewed or expanded sales.

Each of these groups has important strategic reasons (such as survival or large potential rewards) to participate in the integrated personal workstation business. The rewards are enticing and the competition will be intense.

As has been true from the beginning in the evolving microcomputer industry, the keys to success will continue to change. Opportunities will be provided for new competitors to secure positions or for existing competitors to become stronger. Competitors which can provide (or be part of) an integrated capability or offering based on information and communications capability will have a significant edge.

Suppliers who can convey or demonstrate reliability, on-going support and investment protection will have an advantage. Advantages will also accrue to those who can reach and support widely dispersed users. Participants who have a current understanding of user applications, work requirements and environment, as well as how procurement decisions are made, will have a strong competitive advantage.

Suppliers who can convey or demonstrate reliability, on-going support and investment protection will have an advantage. Advantages will also accrue to those who can reach and support widely dispersed users.

Some competitors will have adequate technology, products and systems orientation to provide integrated personal workstations, but these may not be enough.

For many the critical attribute may be endurance — the ability to remain viable while the system architecture, communications infrastructure and standards develop — that will move the marketplace toward long-term growth.□

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PHOTOS BY LUKE ENGLIS

CW Buyer's Guide Interviews

Gene Amdahl

By Marcia Blumenthal

When Gene Amdahl left Amdahl Corp. in 1979, starting another computer company was the last thing on his mind. Or so he said. A year later, however, he resigned as chairman emeritus from Amdahl, the company he founded in 1970, to form Trilogy Systems Corp.

Soft-spoken and dignified, Amdahl projects the image of an elder statesman of the computer industry, a role he confides that sometimes disturbs him. Nonetheless, in his thirty-odd years of being a leader in the computer industry he has witnessed the unfolding of the history of commercial computing, an experience relatively few people share.

A budding physicist in a graduate program at the University of Wisconsin in 1950, Amdahl thought there was a better way to compute numbers than with a calculator and slide rule. That "better mousetrap" emerged as the Wisconsin Integrally Synchronized Computer, now fondly known as the Wisc. Amdahl describes it as a one-ton version of today's hand-held calculators. The system had a main memory of 1,000 words, an overlap/pipeline which allowed the machine to perform four operations concurrently and an input/output mechanism which was the first channel that occurred in computers, Amdahl recalls. Amdahl designed Wisc with university support as an educational tool for training engineers in a new field called computers.

The Wisc remained operational at the university until 1959, when the last man able to maintain it retired and took it home with him, where it was used as a backdrop for a pistol range. After the man died, his family offered it to Amdahl. Smattered with bullet holes, today the Wisc, which looks like the stereotype of an infernal machine imagined by H.G. Wells, resides at Trilogy. Amdahl takes obvious pleasure in showing visitors his original design and telling about its history.

By the time the Wisc was built in 1954, Amdahl had already been working at IBM for two years. During his career at IBM Amdahl was the project engineer and chief designer of the IBM 704 and later was

'Most fault-tolerant computers consist of two computers — one asks the other if it feels sick. The Trilogy design is a single system.'

'Basically a large portion of IBM 3081 users want a larger machine; that's why the firm introduced a system with two processors.'

'There are a lot of new things going on today. But it's curious how these new ideas consist of reworking old concepts.'

in charge of developing the architecture for the IBM 360

After a long career at IBM, Amdahl started Amdahl Corp., the first manufacturer of IBM plug-compatible mainframes, in 1970

Trilogy is Amdahl's second start-up computer venture. Initial funding for the corporation was $160 million gathered from many sources, including a research and development limited partnership, a $14 million investment by the French corporation CII-Honeywell Bull and grants from the Irish government for the purpose of setting up manufacturing facilities in that country.

Trilogy is still raising capital and recently agreed to allow Sperry Corp. 15% ownership in the firm in exchange for an investment of $42 million

Joining him in the venture is his son, Carlton, who was a principal in Magnuson Computer Systems, Inc.

Recently Amdahl met with Marcia Blumenthal, editor of Computerworld Buyer's Guides, *to share some of his experiences in the computer industry and to discuss the upcoming Trilogy system.*

What is the idea behind the new Trilogy system?

Basically our mission is to develop new semiconductor technology, which will be useful for many things besides computers. About 75% of the cost of our program is allocated to chip development and automated design techniques. The other 25% will go towards the computer system.

Who designed the chip that will be used in the system?

Carl and I worked it out ourselves. It's a new way of approaching redundancy. Chips used in other computer systems can't have any defects. Ours will permit many defects. That means chips that would have otherwise been rejects are considered good. The chip has active redundancy which will tolerate new faults even after the computer system is shipped. The greater percentage of the faults will never be noticed by anyone. This improves reliability and the mean time between failures will be measured in years rather than weeks. The reliability improvement allows a high yield on chip production and therefore brings the cost of a system down.

Are you using very large-scale integration [VLSI] with these chips?

The physical size of the chip itself is very large, about 2.5 inches square. Using this technology, 40 wafers can be used instead of 4,000 chips. It has an extremely high level of integration — higher than VLSI — and it is bigger than a 256K bit chip. IBM takes a ceramic motherboard and puts a lot of little chips on top of the chip connection. Our one big chip holds about two-thirds of the circuitry of one of IBM's thermoconduction modules.

So you are aiming to produce a very high-performance, IBM plug-compatible mainframe?

An IBM-compatible system is able to run programming written for IBM computers. Our system can do that and is able to connect to peripherals that can connect to IBM computers.

But the Trilogy system, when introduced in 1985, will be a continuously operating, large, fault-tolerant computer. Most fault-tolerant systems consist of two computers — one asks the other one if it feels sick. Our system is a single system that doesn't get sick; it performs in spite of being sick and performs without fault. This is because special circuits on the chip detect failure and relay signals to another set of circuits on the chip.

The system is a very fast on-line general-purpose computer system so anyone with large-on-line applications is a potential user.

Why haven't there been other very large fault-tolerant systems built to date?

Because current fault-tolerant systems are really two processors. They depend on a job being neatly partitioned. In very large applications it is difficult to partition jobs so they can be put on two separate computers.

For example, the AT&T computer center in New Jersey may have 14 high-end systems; a couple of Trilogy systems will be able to replace all of those.

Do you fear IBM coming up with such a system before you introduce the Trilogy system?

It's difficult to decide how to approach the solution. We found an easy way to do it, but it wasn't easy finding the solution. IBM would like to do it, but I don't think they will. There wasn't really anything new we had to do with the system. The technology and ideas have been around along a long time, but have never been thought of in those combinations before.

What is the market potential for these large fault-tolerant systems?

Well, a study done for us in 1980 by International Data Corporation projected that in 1985 IBM would ship 2,000 high-end units worldwide. At the end of 1982, IBM shipments were running 50% ahead of IDC projections.

Basically a large portion of IBM 3081 users want a larger machine; that is why the firm introduced a system with two processors. John Opel, IBM's chairman, estimates computing power in mips [millions of instructions per second] at user sites is growing 50% annually. This is because almost everything being done in the corporation today is in someway involved with computing. The proliferation of micros will increase the need for large computers. If a company doesn't keep up, it will not be able to be competitive.

And today, companies are running their businesses as tight as possible because of the economy, so managers need up-to-date information about what is going on in

the company.

Right now our competition is running at about 14 [mips]; we expect to come out with a 32-mips machine. There will be very many 3081s that we replace.

When will your system debut?

We will ship our first one for testing in very early 1985. Right now we are negotiating with a large insurance firm to be the test site.

What will your pricing be?

Our price for a 32-mips machine will probably be in the $5 million range, but we haven't decided that finally yet . . . However, we think we can manufacture our system at one-third less per mips than IBM does.

[Trilogy projections show IBM's price per mips in 1985 will be $245,000 for a 25-mips machine. The firm estimates IBM's cost per mips at 15% of the list price of the system divided by the number of mips.]

Historically other IBM-compatibles price their systems at 40% price/performance over IBM systems. Trilogy doesn't have to do any better than that. We may be able to ask a premium, but with a relatively small sales force, we may have to temper our ambitions on price.

This is your second time around starting a computer firm. What lessons have you learned?

Not enough! Keeping control over the ownership of the company is important because it determines whether you can implement the programs you think are best for the company. I wanted Amdahl to have the right to manufacture its products. It doesn't; it gave it away. So now they can't determine the cost of the product. If you can't determine the cost of the product, you can't set up long range plans for the company. You have lost one of the basic elements of your strategy, which is getting the cost structure that will be appropriate for some time in the future.

[In raising the initial $160 million for the company, the firm's founders retained 71% of the ownership of the firm. After the R&D limited partnership is dissolved, the owners will retain a 50% interest in the firm.]

The IBM plug-compatible market doesn't seem to be as exciting as it promised. What do you think has happened in this market?

I think IBM has done everything it can to make it difficult for the PCMs [plug-compatible manufacturers]. More than anything else, the firm withholds information about its new products in a way which is both unreasonable and anticompetitive.

What technologies do you find exciting today?

There are a lot of new things going on, but the curious thing is how these new ideas consist of reworking of old concepts. I find the 256K memory chip very exciting. Also, Cmos semiconductor technology is very interesting. Cmos has low power requirements, but very complex structures that will make powerful personal computers available. Also, plasma display terminals are interesting, but I don't know whether this technology will be feasible unless power requirements and cost come down.

It is possible for a product to have technical promise without having commercial promise.

You see new things that should replace old ways of doing things, but there is so much investment in the current technology that it never happens. Magnetic bubble memory is an example of an exciting technology that didn't make it commercially.

You have generally worked in the high-end product market, but what do you think about the personal computer explosion?

I have to admit I never thought the personal computer would find a market. I didn't believe there were enough people interested in using computers for practical purposes.

What do you foresee happening in the information systems environment?

I think the expert systems approach will become part of the corporate world, particularly for planning. Right now these systems are still not intelligent because they don't learn by themselves, but it won't take too much to get these systems to operate that way.

How significant a threat do you think Japan is to the U.S. computer industry?

I think Japan presents very real competition to the U.S. Japanese companies have technology that exceeds what is good at IBM.

There is a myth that Japanese companies don't know how to create software. They know how to [create] pretty good software. Japanese firms are skilled in every area they have to be. The Japanese are also very active in robots and memory technology.

Unless something is done by the U.S. and Japan to ensure equal competition, I don't think computers will principally provided by U.S. firms.

I don't think the U.S. government should intefere to help the industry, but I think it should intefere to get the Japanese to take some of the protective measures off its marketplace or to pay some kind of penalty to make the competitive basis equal.□

Contributing to this article was Computerworld *Staff Writer, Patricia Keefe.*

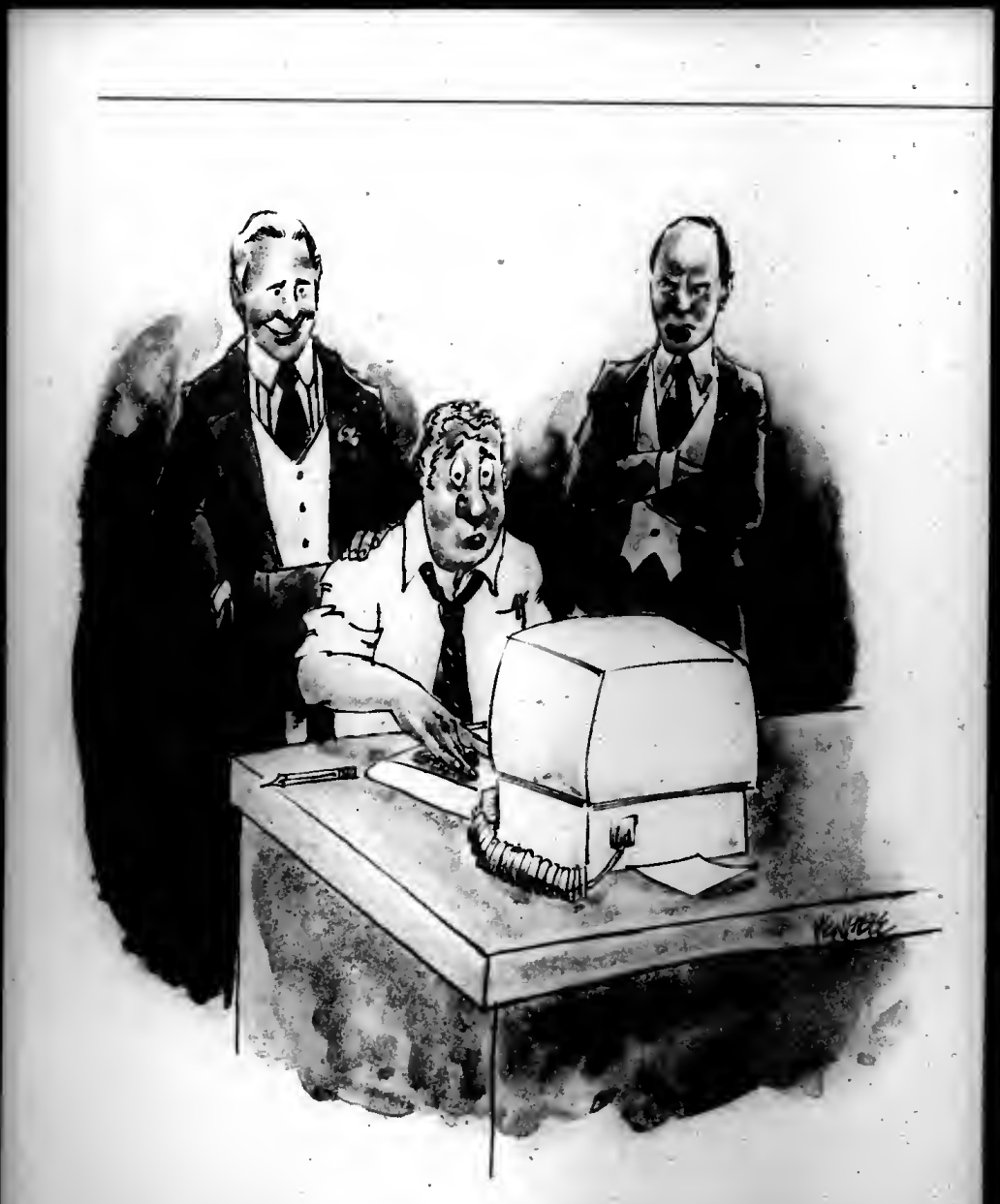

ILLUSTRATION BY JIM VENABLE

Dilemma or Opportunity?

Information systems managers view personal computers with both excitement and fear. What role should these managers play in ushering these professional helpmates into the corporate mainstream?

By Robert Freeman

To say that personal computers have stirred a revolution in information processing is now a well-accepted notion. The ability of these personal work-machines to enhance corporate productivity, especially at the managerial level, is unparalleled. And they have intensified competition in the computer industry as well as stimulated the U.S. economy.

But the role personal computers will play in the evolving corporate management information systems (MIS) strategy has yet to be thoroughly defined. It is a role requiring the attention of information systems planners because of both the rapid growth in personal computer use and the proliferation in the ways they are used.

The market research firm Input, Inc. estimates that by 1986, 16 million personal computers will be installed in businesses nationwide, with eight million of those installed in Fortune 1000 companies. But today, personal computers are still novelties in the corporate setting. Sixty percent of all corporate departments using personal computers have installed them within the past year, 25% of those within the past six months. Clearly, if the above prediction — which is probably conservative — is to come true, a huge influx of personal computers is likely within the next few years.

Users' attitudes and plans for personal computers seem to support this expectation. In the Input study titled "Personal Computers in the Information Systems Strategy," the 185 personal computer users (based in large corporations) who were interviewed expressed overwhelming support for this form of computer. Sixty percent of the users interviewed planned additional hardware purchases within the year. Fifty-five percent planned additional software purchases. Many were patient with shortcomings they would never have tolerated in MIS department or commercial time-sharing computing solutions.

Departmental plans for personal computer purchases were even more aggressive than those of users. Department heads of 50 Fortune 500 companies planned for average increases of 129% in expenditures for personal computer hardware and software during 1983.

In another study of 306 large companies, overall spending for mainframe and related hardware and software was expected to increase only 8% in 1983 from 1982 spending. Spending for personal computers, however, was expected to increase by 60%. It is clear

that personal computers are slated for major growth in the corporate environment

From the user's point of view, the personal computer is the ideal information processing resource. Its solutions are fast. Many of the tasks it replaces were formerly done by hand, either because applications programs or program

Overall spending for mainframe and related hardware and software was expected to increase only 8% in 1983 from 1982 spending. Spending for personal computers, however, was expected to increase by 60%.

mers were not available or because the wait was too long. This study revealed that programming delays of four to five months were common and that two-year waits were not unheard of

Users perceive the personal computer to be cost-effective — even more so as hardware costs fall while programming costs continue to rise. Perhaps more importantly, users feel they have better control over their computing "destiny" when using personal computer systems.

In selecting computing alternatives — personal computers, commercial time-sharing and in-house information system resources — users judged ease of use and time to get up and running (or implementation speed) to be the key factors in their choice of information processing resources. Response time, cost and control factors were also critical in the selection process.

Although commercial time-sharing compared well on the first two bases, its considerably higher operating costs, especially at the department level, are a major drawback. Like time-sharing, most personal computer purchase plans are made at this level, with lower cost being a powerful incentive for increasing personal computer use.

However, when it comes to personal computers, MIS department objectives differ from those of personal computer users. The tasks for which the MIS department must plan exceed the capabilities of micros, but the immediate users do not care about the big picture, they just want the convenience of a personal computer.

Input's research identifies four broad objectives for MIS management in the near-to-midterm future and several tasks for realizing each of those objectives. The objectives are: improving MIS planning, increasing MIS cost-effectiveness, extending computing power throughout the organization and increasing MIS contribution to corporate goals.

Capacity planning, life-cycle planning, and resource optimization exemplify the tasks necessary for improving overall MIS planning. Increasing cost-effectiveness, the second objective, demands such requirements as effective charge-back systems and improved hardware efficiency and programmer productivity

But personal computers pose two major dilemmas for MIS managers and strategies. First, conflicts can arise within any of the four objectives. In improved planning, for example, personal computers could either displace existing information systems or lead to an increased demand for them — depending on how well they are integrated into the overall corporate information system.

Personal computer applications could skim off in-house time-sharing work, leaving high overhead in the MIS department. Resulting MIS cutbacks might leave personal computer users unsupported. Future exchanges between MIS and micro users would then be even less satisfactory from the user, MIS or corporate standpoint.

Another survey of 586 MIS departments confirmed this notion of uncertainty: future planning and control were the most frequently mentioned problem areas for information system management. Significantly, the importance of this problem increased with company size.

The second major dilemma is that personal computer usage may lead to conflicts between MIS objectives. For example, personal computers certaioly contribute to the goal of extending computing power throughout the organization. Users have access to low-cost, on-line processing for transactional and analytical requirements.

By 1990, analytical or decision support processing will have grown from 35% of all computing up to 60%, while transaction processing will decline from 65% to 40%. The size of the pie will have grown by a factor of 10 during the period. Just as important is the enormous growth of dispersed processing, from 20% to 55% of all processing.

To be sure, personal computing systems will not be the sole source of these two major changes in computing focus, but they will surely stand as a major factor, the more so as hardware (especially local-area networks) and software (down-loading and integration) advances continue to compound their capabilities.

But, at the same time as they are extending computing capabilities, personal computers could be increasing overall computing costs and leading to other inefficiencies. The hardware and software purchase plans mentioned earlier indicate corporate, departmental and user enthusiasm for adding to the value of their systems. Yet uncontrolled growth from these various sources could result in incompatibility among data, hardware and software.

Even worse is investment in virtually obsolete devices or machines that are unsupported because of vendor failure. Fascination with gadgetry commonly leads users to spend more time programming applications that might be available on a "canned" basis. Poor matches of

tools with tasks are common, with gross mismatches possible. Some managers were found performing word processing on Visicorp's VisiCalc, for example.

These are just a few examples of conflicts certain to arise as personal computer growth continues. MIS managers foresee that isolated or even widespread success with personal computers will be attributed to users or to the machines themselves, yet widespread failure of personal computers is likely to be seen as an MIS failure — something that should have been prevented.

The adoption and early implementation of a personal computer strategy are now necessities for large corporations and large users of computing resources. At present, only 22% of all corporate users receive any kind of assistance from their informatioo systems departments. Self-teaching help from vendors aod computer stores all rated higher than information systems departments as sources of assistance with personal computer problems.

But the MIS department is the logical organization to direct personal computer use, especially when corporate-wide goals of coherent information systems planning and cost-effectiveness are considered.

The question arises, then, as to what role MIS organizations can and should play in the personal computer revolution. Many MIS organizations are currently at cross purposes with personal computer use, which in some cases are viewed as functional competitors. This is especially true for those organizations that have replaced commercial time-sharing with extensive in-house networks.

But from the user's perspective, control is the most highly valued feature of his personal computer, frequently the only way to escape dependence on internal MIS departments.

There are a range of possible roles forseen for the MIS organization or manager which range from the extreme position of controller to the position of informal advisor. In between are roles of specifier, coordinator and information provider.

The controller role is almost doomed from the start. In this situation the MIS department seeks to plan and control personal computer use throughout the organization, as if personal computers were extensions of the central information systems department. Not only will users resist and attempt to undermine such a role, but few MIS departments have the resources or expertise to carry it off.

By acting as a specifier, MIS would define what departments may or may not do with personal computers, including what hardware and software products to buy and the types of work to be performed. This role is already being attempted in some companies and industries, but will prove difficult to maintain in the face of the extreme dynamism in personal computer technology, price, and applications.

Input believes that the role of coordinator is appropriate for most MIS organizations. It is also the one most likely to result in a successful melding of user desires and organizational needs, while accommodating rapidly changing technology.

This role covers a wide range of activities. It encompasses vendor selection, establishment of hardware, software and communications standards and organizing user groups and information exchanges. The coordinator should work with purchasing and accounting departments to maintain budgets and gain volume discounts and with vendors to secure maintenance. He should be responsible for documentation and for monitoring the success of personal computer use and its integration into the organization's overall information strategy.

The role of information provider is more passive than that of coordinator but he must take an active part in promoting personal computer awareness, while making no effort to control or direct their use. At the far extreme (short of doing nothing) is the informal advisor, available if consulted but essentially passive. Given users' current resistance to depend upon MIS, this position virtually assures that MIS will be ignored or passed by in personal computer development.

MIS managers foresee that isolated or even widespread success with personal computers will be attributed to users or to the machines themselves, yet widespread failure of personal computers is likely to be seen as an MIS failure — something that should have been prevented.

The initial, sometimes euphoric, enthusiasm for personal computer use disguises the fact that many personal computers are now essentially fair-weather systems. They are adequate for certain tasks and will surely continue to increase in capability and usefulness. But they have neither been critically tested for many applications nor have they stood the test of time. Standardization, for example, remains a major problem, as does documentation and overall value in proportion to expenses.

Above all, the personal computer role in supporting information systems objectives needs careful scrutiny and planning. This is even more critical now as usage of these systems is already well under way. Well conceived, planned and implemented personal computer strategies will go a long way toward insuring a productive, valuable future for this exciting computiog resource.o

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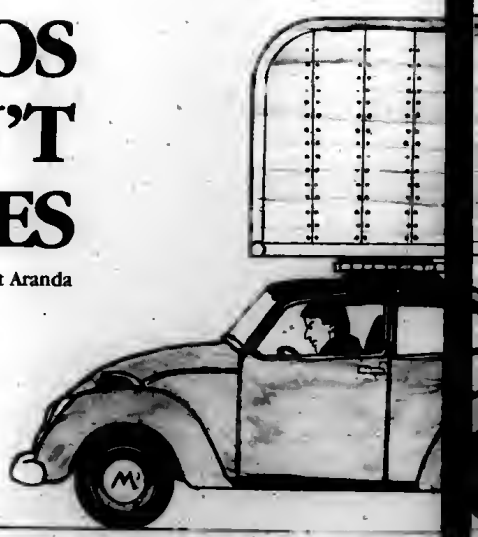
MICROS AREN'T MAINFRAMES

By R. Rembert Aranda



Of course they're not! Yet MIS professionals persist in treating these systems like smaller versions of mainframes. It's time to take a fresh look at what these small wonders can and should do.

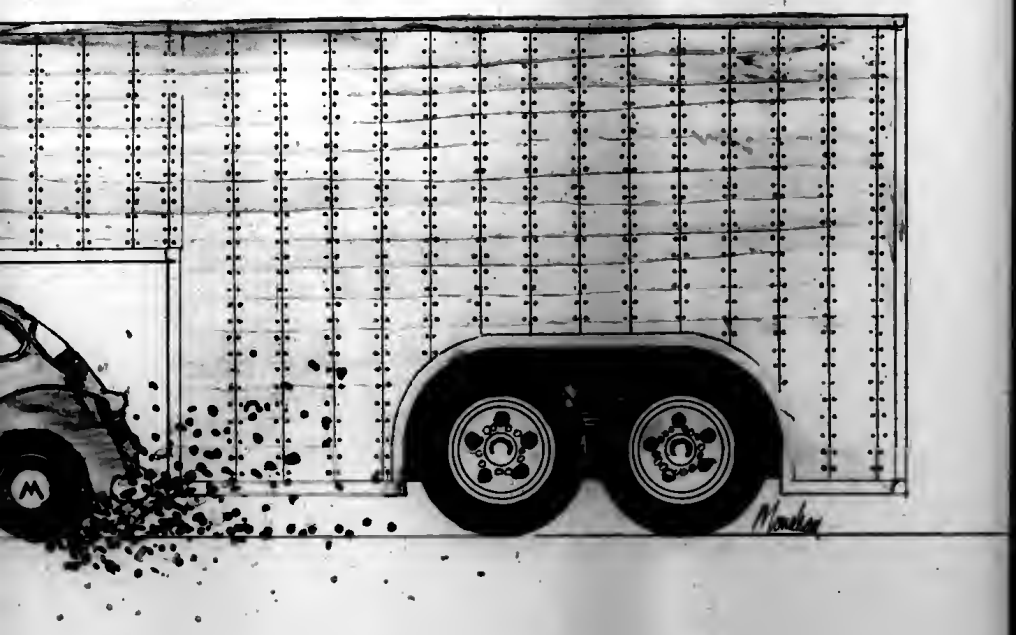
The long-sought-after multifunction workstation has arrived, but many office automation (OA) experts are having trouble recognizing it because it came disguised as the personal computer.

The role of personal computers in OA is poorly understood primarily because they have created new, revolutionary opportunities and a new computing culture beyond the original vision of many DP and OA managements. As a result, an undeclared war has been waging for the past four years in corporate environments between DP/management information systems (MIS) "establishment" forces and the personal computer "revolutionaries."

Personal computers are potentially the best development tools that DP has ever had. However, realizing that potential requires that DP/MIS management take an active role in encouraging and supporting wide deployment of personal computers. This DP role needs to be oriented to support rather than to control.

DP and OA managements must begin to view the personal computer not as a toy or a threat but as a tool, and must also recognize that the end of the terminal and shared-logic word processor era is at hand.

It is also essential that DP and OA management begin to provide communications and on-line services to personal computer users. The time-sharing bureaus have, on the whole, found it easier to recognize this need and have geared up to seize this opportunity on a larg-



er scale than have corporate and departmental DP organizations.

The difficulty experienced by many DP managements in making this transition is especially tragic, because the explosively growing number of personal computers is generating an immense demand for the host-network services, of which internal DP/MIS organizations are ideally placed to meet.

The first step toward meaningfully defining an office systems role for personal computers is to understand that personal computers are different from shared DP computers in ways much more fundamental than size. A personal computer is not a little computer. It is best not to think of it as a computer at all.

This notion that a personal computer is not a computer is best explained by using an analogy to transportation. Imagine that a crazed bunch of academics founded a university department of motor vehicle science. The department's introductory course might include a large chart showing the continuum of motor vehicles. The chart would list the major types of motor vehicles, itemizing for each the components of a motor vehicle system: engine, chassis/body, wheels, cargo area and so on. Such a chart would position large trucks as "real" motor vehicles, those having powerful engines and enormous carrying capacity. And the chart would position cars as low-performance, "toy" motor vehicles, with underpowered engines and almost no cargo carrying capacity.

Similarly, to conceive of personal computers as computers because they have system components (CPU, primary storage, disk drives and so on) and to think of them as "little" or "toy" versions of mainframes and minis are misguided notions and avoid a meaningful understanding of their role in the office.

Personal computers have dramatically altered the economics of

ILLUSTRATION BY TOM MONAHAN

computing, making feasible all sorts of applications which are not economically or conveniently carried out on a shared-host basis. Spreadsheet analysis and word processing are two convenient examples of this.

The core of the personal computer's attractiveness is that it delivers computing power on users' terms without requiring them to give up autonomy or to depend on the overburdened DP department to get the work done. Also, all of the personal computer's resources are available to one person. That means there is no overhead for the software that administers the sharing of one processor; in addition, better response times are found for most office applications.

Just as the choice of a car and its options allows users to personally address their needs and preference, so does a personal computer. The user-tailorability of a personal computer is formidable, wholly beyond what would be possible with a shared computer, whose functionality represents a compromise facilitated through the trading-off of the needs of several users. The lead time required to implement a personal computer application is also much shorter than for data processing systems, on the order of days or weeks.

To press the analogy to transportation a bit further, a truck is so expensive to own and operate that idleness becomes an enemy to be avoided by scheduling in advance to keep the vehicle running. With a car, though, idleness is a fine and valuable thing called "availability" — allowing immediate access at the user's whim for whatever purpose desired. This analogy is the same for computers.

The fact that the personal computer is idle most of the time means that the marginal cost of computing approaches zero. This in turn means that new applications can evolve far more easily than in a traditional data processing environment where the marginal costs of computing are so large that they routinely require elaborate cost/benefit studies and long lead times for planning and development.

In defining a role for personal computers in advanced office systems, it is important to consider both the personal computer's strengths and weaknesses, as well as to provide host/network services as a means to augment personal computer capability and overcome its limitations. The table below summarizes personal computer advantages and disadvantages compared to traditional data processing systems.

If the multifunction personal computer has one major purpose, it is to serve as an applications development machine for nonprogrammers. The most successful software packages for personal computers are not really applications at all, but rather "tools" through which the user can develop his own applications with — in lieu of programming. No more convenient example exists than the spreadsheet. The user who, after creating a few spreadsheets on his personal computer, replaces a stack of paper spreadsheets and a manual process with a computerized process and a set of machine readable files has developed an application. This application, however, does not fit the standard notion

The Personal Computer: Pro and Con

ADVANTAGES

- Full control by user of applications facilities
- Lower costs for hardware and maintenance
- Software inexpensive enough to be used as "throw-away" prototype
- Negligible marginal cost of computing
- Constant processing power, independent of other users' activity
- Ready availability of color and graphics displays
- Lighter requirements for environment characteristics and hardware maintenance
- Portability
- Computer power available to user at any time convenient for him
- Greater uptime than larger systems

DISADVANTAGES

- End user must assume the system management roles (such as media back-up and software installation) from which he was previously insulated
- Limits on the size of application programs that may be executed
- Processor-bound applications may exceed hardware capabilities
- Decentralized data storage may result in multiple, inconsistent data files with attendant data management problems
- Limited software support, though in general software needs less support due to lower complexity
- Small, unstable vendors with lower probability of continuity than established minicomputer or mainframe vendors
- Software protection mechanisms employed, and other factors may severely limit ability to modify and tailor software or to share data files among multiple applications

of applications development, and compared with procedural language programming environments there are many restrictions. Nonetheless, a user-developed application it is, and it is much quicker and cheaper than more traditional applications development.

The three most widely implemented types of personal computer office software are word processing packages, spreadsheet/modeling packages and data management systems. In addition, there are five other popular types of packages, including systems for communications and terminal emulation, graphics utilities, vertical applications, report and application generators and user "shells" for integrated application environments.

These five software types are not as widely implemented as the first three, but are rapidly gaining in popularity. The last type listed, user shells for integrated application environments, exists in two major forms. The first consists of bundled packages (such as Lotus Development Corp.'s 1-2-3 and Visicorp's VisiOn), which incorporate spreadsheet, word processing, graphics and sometimes other functions.

The second are packages that allow users to assemble their own integrated system using software packages of his choice. Examples of the latter include Epic Computer Products, Inc.'s Supervyz and The Information People's Organizr.

Data management and personal word processing packages, are widely used as applications development tools for nonprogrammers. The data management packages, some of which are really data base management systems (DBMS), allow users to define forms, to collect data and to report formats.

Some personal computer DBMS packages now have available application generators which allow users to define nonprocedurally an application and have the machine generate high-level source codes.

The list management modules of WP systems are routinely used to implement crude transaction processing systems; inelegant by DP standards but attractive to personal computer users who value speed of implementation and self reliance.

The wide implementation of data management packages on personal computers has prepared many end-users for appreciating DBMS packages and tools (such as query languages) available on minicomputers and mainframes. Technologically oriented personnel tend to think of personal computer functionality in hardware terms. In contrast to this, end-users tend to think of personal computer functionality in terms of the applications software base available for a given machine.

While the merits of personal computers as stand-alone machines are becoming relatively well-known, users quickly come to expect to be able to connect their systems to other personal computers or to time-sharing hosts as an intelligent terminal. Communication capabilities on personal computers are important because they allow users to exchange documents, data and software with coworkers.

Communications capabilities also allow personal computer users access to data existing on corporate and departmental DP hosts. By allowing such access, many of the DP applications now geared to periodic large report generation can be reoriented to on-demand quety processing, reducing the cost and workload of data processing centers.

Communications capabilities are essential to personal computers used as office workstations. Office workers are "team players," devoting 60% of their typical work day to communications activities. Usually, office workers prepare documents or calculations to be sent to at least one other person. Most of the documents processed by office workers are in turn at least partially prepared by their colleagues. Therefore, it is a key requirement that the personal computer allows users to exchange as well as to prepare documents

Most popular personal computers can serve as terminals to host and networks. However, most personal computers in use today function as stand-alone machines. This is due in part to the historical an-

If the multifunction personal computer has one major purpose, it is to serve as an applications development machine for nonprogrammers.

tagonism between DPers and personal computer users. A conspicuous exception to this rule are personal computers that are used to access the rapidly growing number of on-line data banks and information utilities such as Dow-Jones, Compuserve, Inc. and Source Telecomputing Corp. External host/network services allow office workers to obtain and send information outside of their organizations nearly as easily as they can within them. This is a key benefit of advanced office systems. Most electronic mail implementations at present are tackled at the departmental or corporate level. This leaves unsatisfied the need to communicate with individuals not on the mail system. Users can send mail electronically to correspondents not on their internal systems by using public electronic mail systems such as Tymnet, Inc.'s Tymnet; GTE Telenet Communications Corp.'s Telenet; Compuserve's E-Mail; and the U.S. Postal Service's Electronic Computer-Originated Mail (Ecom).

Personal computer access to hosts and networks typically make use of communications software such as Polygon Associates, Inc.'s Poly-TRM; Southwestern Data Systems' AE Pro and Z-Term; and Decmate CX/DX. Such software runs

on the personal computer, manipulating the communications port and modems to provide such functions as:

- "Dumb" terminal emulation.
- Uploading of local personal computer files to the host.
- Downloading host data to local personal computer files.
- Automatically dialing host telephone number, with repeated redialing if the line is busy or there is no answer.
- Definition of personal computer function keys as "macros," allowing repetitive multiple key sequences to be sent with one keystroke.
- Automatically executing host logon sequences.
- Unattended host access and file upload/download operations.

The wide implementation of data management packages on personal computers has prepared many end-users for appreciating DBMS packages and tools (such as query languages) available on minicomputers and mainframes.

Although about three-quarters of the functions required by office workers can be delivered by the personal computer in stand-alone mode, the other 25% requiring host/network access is of critical importance, far more than its proportion suggests.

A personal computer user may spend one hour manipulating spreadsheet data and using a personal word processor to fold the data into a memo and might then consume only 30 seconds of host connect time uploading the memo to the host that he uses for electronic mail. But the short host connect time might save other workers four days of waiting, ultimately shortening the time needed to complete the total task.

Another key issue in defining an office role for personal computers is acquisition and operating costs. Office systems are aimed at having at least one workstation per office worker. Consequently, the total cost per workstation is even more important than in traditional data processing and word processing systems.

Personal computers are often perceived as too expensive for widespread use when compared with terminals. But a personal computer is often cheaper. The usual comparisons show that terminals cost between $500 and $2000 while a personal computer costs between $2000 and $10,000. This is an unsound basis for comparison because a personal computer by itself delivers a multitude of functions, whereas a terminal by itself does nothing.

Rather than considering only the isolated price of a workstation, what should be measured is the cost of total system resources needed to make each workstation (whether personal computer or terminal) provide the function required by office workers. This involves allocating a share of the total cost of operating the host system that supports the terminal or personal computer. Such costs include:

- Host system processor, memory and disks.
- Host system peripherals.
- Host system software acquisition.
- Software development labor.
- Hardware/software maintenance labor and contracts.
- DP center labor.

Upon factoring in these costs, we see that terminal cost is merely the tip of an iceberg. The overwhelming cost is in the "undersea," or invisible portion. The first three cost categories listed above are limited costs, typically amortized over a seven-year period. But the last three categories continue for the life of the system, in fact they actually become more expensive every year, due to labor cost trends.

The personal computer has a hidden portion, too, but typically a much smaller one than the terminal. The reason for this is simple, the terminal must be connected to the relatively expensive, shared host services for all of its functions to be performed, while the personal computer need only be connected for a small portion of its activity. Moreover, that connect would not need to occur during prime time. Personal computer communication software could be used for unattended host access and file upload/download during off-peak hours.

The net result is that the number of personal computers that can be connected to an office host is usually between two and 10 times larger than the number of terminals that could be connected. Consequently, the personal computer annual share of the host-operating costs is much smaller than that for a terminal.‡

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FAULT TOLERANCE
Knocking Out Downtime

By Omri Serlin

Interest in fault-tolerant (FT) systems, which for nearly eight years was limited to Tandem Computer, Inc. and its products, has greatly intensified over the past year or so. Significant amounts of venture capital have been invested in a number of FT start-ups, including Stratus Computer, Inc., Synapse Computer Corp., Auragen Systems Corp. and Tolerant Transaction Systems. At least two well-established companies (Hewlett-Packard Co. and Computer Consoles, Inc.) have also entered the field. Others, including IBM, NCR Corp. and AT&T, are expected to unveil FT products before year-end 1983.

The main reason for this enhanced interest in FT systems is the rapid development of on-line systems. Unlike "back-office" batch systems, on-line systems are at the heart of many modern businesses. Examples abound in many industries: reservations systems for airlines, hotels/motels and car rental agencies, to mention a few. Even such classical back-office applications as accounts payable and inventory control are now going on-line.

While on-line systems lead to higher employee and process productivity and more timely reporting, hence tighter business controls and new or improved customer services, they also make the business much more fragile: the tangible and intangible costs of a computer failure are sharply higher in the on-line environment.

Fault-tolerant systems are attracting attention because they promise to reduce the probability that a failure in any one of their internal subsystems will have an adverse impact on the end-user, the process being controlled, or the validity of the data in the common data base.

Fault-tolerant features were incorporated in some of the earliest relay and vacuum-tube digital computers. In the 1960s, however, interest in FT features declined as the introduction of transistors and integrated circuits greatly improved component reliability. The

ILLUSTRATION BY RICHARD TENNANT

development of error-correcting codes brought solid-state memories to the reliability level of the older magnetic cores. FT techniques continued to command interest in a few specialized applications areas, including computer-controlled telephone switching, military and commercial real-time monitoring and control systems. Fault tolerance also aroused interest, though to a lesser degree, in the commercial time-sharing area.

Tandem capitalized on the maturing minicomputer technology to achieve a price/performance edge vis-a-vis mainframes. Today's powerful 16/32-bit microprocessors are likewise making possible new FT designs that were economically out of the question only a few years ago.

The typical solution to the high availability requirement during the '60s centered around the back-up concept, in which a second, complete system stood by ready to take over the load should the primary system fail. Some switching arrangement, typically manual, was provided to switch the peripherals from one system to the other. Software for such systems was generally custom fit to the application, often by the end user.

The development of airline reservations systems in the late '60s and early '70s was significant for two reasons. First, while these systems still used variants of the redundant back-up scheme, they also served as test beds for many of the practical aspects of today's fault-tolerant systems, including the concepts of disk mirroring, record and file locking, checkpointing and audit trails. Second, they were the harbingers of the on-line transaction processing applications, which today constitute the largest potential market for fault-tolerant systems.

Tandem Arrives on the Scene

In 1975, Tandem's founders astutely recognized that the on-line transaction processing field would eventually grow to encompass numerous applications and that most such applications could be better served by an architecture that relied on a multiplicity of minicomputer-class processors, rather than the giant mainframes used in the airline reservations systems.

Using existing minicomputer technology, Tandem developed a unique new architecture that for the first time delivered true fault-tolerance at an affordable cost. Tandem's solution, now called Non Stop, differed from the redundant back-up scheme in several important respects. First, the many single points of failure inherent in the older schemes had to be eliminated. Second, the Tandem system offered, for the first time, the ability to remove defective subsystems and return repaired ones to service without disrupting ongoing operations.

The extent of the on-line repair capability is a touchstone test for any system claiming to offer fault-tolerance. Achieving this capability requires such hardware features as a redundant power distribution system and provisions for controlling electrical transients created by printed-circuit board removal and insertion. More importantly, the software system must be designed to accommodate the on-line removal and reinsertion of subsystems in a way that isolates the user's programs from such changes in the system's configuration. The subsequent wide-market acceptance enjoyed by Tandem is due in no small measure to its success in meeting these design goals.

A Tandem Non Stop system consists of anywhere from two to 16 processors. Each processor is in effect an independent 16-bit minicomputer with its own memory and I/O channel. The more recent Non Stop II added a limited 32-bit addressing capability. A high-speed (6.7 MHz), 16-bit-wide bus system connects all processors and is used for interprocessor communications. Dubbed Dynabus, this system actually includes two identical 16-bit buses, each with its own access controller, which arbitrates bus usage among the processors.

The peripheral controllers are dual-ported, so that each may be accessed by I/O channels from two different processors. Dual-access disk drives are each attached to two controllers, thereby assuring that the data they hold is accessible even when both a controller and a processor fail. To guard against the loss of data due to a failure in the drive itself, disk mirroring can be invoked by the user.

When active, disk mirroring causes the system to maintain automatically identical copies of the designated files on two independent drives. This action is transparent to the user. In normal operation, the system will execute all write requests to both disks, while satisfying read requests from the head nearest the desired data. Following the recovery of a failed drive, the user can invoke a utility which gradually restores the repaired drive to mirror condition.

A copy of the Guardian operating system, along with a table of available resources and their location, is kept in each processor's memory. At regular intervals, each processor is required to broadcast an "I'M ALIVE" message on the Dynabus and to verify the receipt of such messages from all other processors. This is a generalization of the watchdog timer scheme, used in redundant back-up systems to detect "stalls," meaning a failed processor or one caught an infinite loop.

Checkpointing

Recovery from failure in the Tandem system relies on the checkpointing concept. Each running process has a backup, an inactive counterpart residing in anoth-

er processor, ready to take over should the primary process or the processor in which it runs fail. The primary keeps its backup up to date by sending it checkpoint messages, each of which defines the state of the process at a given critical point in the computation. Should the primary process (or its processor) become disabled, the system will awaken the backup process, which will then resume the task from the last checkpoint.

Backup processes and checkpointing are still the key recovery mechanisms used by the Tandem system's software. For a variety of reasons, this method proved to be undesirable at the applications program level. A few years ago, Tandem introduced new system software elements called Pathway and TMF, which allow the applications programmer to disregard the complexities of checkpointing. Pathway provides centralized terminal handling capabilities, while TMF assures the consistency of the data base by undoing the effects of incomplete transactions, and by keeping audit trails which permit the reconstruction of a data base should it become necessary. The user provides "server" routines which interface between Pathway and TMF and which are expendable in that their loss will at most require a restart of a transaction.

A key feature of the Tandem software is the isolation of user processes from configuration details. This is achieved by the message system. For example, when an applications process wishes to obtain data from a disk driver process, it must formulate a message addressed to the logical disk in question. The message is handed over to the operating system, which determines the actual destination by consulting the local copy of the resource directory. The user process need not know which two processors have access to the disk in question, nor which one is currently the primary. This isolation is of course essential in order to permit on-line repair.

This isolation has, somewhat unexpectedly, yielded two additional and significant benefits. Since the system can dynamically accept repaired modules, it can also in the same fashion accommodate new ones. Thus it becomes possible, for example, to increase the transaction handling capacity of the system by simply plugging in additional processors. This "graceful growth" capability is so attractive, compared to the alternatives of initially buying extra capacity or going through an upgrade that many prospects have selected Tandem based primarily on this aspect of the system.

Furthermore, since processes are largely unconcerned with the actual location of resources (such as other processes or peripherals), it becomes relatively easy to expand the system to include geographically dispersed nodes connected via long-haul communications facilities, possibly including satellite links. Only the resource tables used by the operating system copies need to be updated to account for remote nodes. Expand is the Tandem software component that handles network routing. Tandem is now building on its networking capability by developing comprehensive corporate information networks, which it dubbed Transfer.

Some 4,000 Tandem processors have been shipped to approximately 600 customers since 1976. Until quite recently, Tandem enjoyed freedom from comparable competition. Now, however, the technological environment is again reminiscent of the one which prevailed when Tandem got its start. Tandem capitalized on the maturing minicomputer technology to achieve a price/performance edge vis-a-vis mainframes. Today's powerful 16/32-bit microprocessors are likewise making possible new FT designs that were economically out of the question only a few years ago.

Stratus' Pair and Spare

One such design is the "pair and spare" concept, employed by Stratus Computer of Natick, Mass. The company was established in mid-1980 and has attracted nearly $15 million in venture capital. It began shipping in February 1982; by the year-end, it had 22 customers and 35 processing modules installed.

A Stratus Processing Module (PM) is a self-contained computer with its own memory, controllers, and peripherals. Each subsystem within the PM is typically contained on a large printed-circuit board. The functions of the subsystem are duplicated (paired) on the board to facilitate self-checking. Each subsystem runs in tight synchronism with an identical subsystems (the "duplex" or "spare"). For example, the CPU board contains two CPU functions, each based on the Motorola, Inc. 68000 microprocessor (actually, two 68000s are used). The pair of CPU functions (four 68000s in all) receive identical inputs; their outputs are compared (self-checked) on each clock pulse. Should a discrepancy be detected, the board "pulls out," letting the duplexed CPU board carry on with the task at hand. Once the bad board has been repaired and reinserted, an interrupt alerts the running processor, which then undertakes to re-educate the "new" board and bring it back into tight synchronism. Memory boards and Zilog, Inc. Z80A-based controller boards are similarly self-checking.

The Stratus approach has immense appeal to prospective customers because it requires no recovery from a failure. The work goes on, using the duplexed subsystem, without missing a beat, and without the need for checkpointing.

A fully-duplexed PM can contain as many as 18 microprocessors. Each function is in effect rep-

(Continued on Page 40)

Fault-Tolerant Systems:

COMPANY/SYSTEM	ADDRESS & PHONE	TARGET MARKETS	CPU TECHNOLOGY	OPERATING SYSTEM NAME & TYPE
August Systems, Inc. *Can't Fail 300*	18277 S.W. Boones Ferry Road Tigard, OR 97223 503/684-5330	Industrial automation & process monitoring/ control 100% end user	Three Intel Corp. 8086-based processors run identical code when in FT mode	RTTS (Real Time Task Scheduler), one copy per CPU
Auragen Systems Corp. *System 4000*	210 Sylvan Ave Englewood Cliffs, NJ 07632 201/894-0620	On-line transaction processing (OLTP), medium to large companies 100% OEM	Up to 32 clusters. Three Motorola, Inc. 68000's on a high-speed, duplex, parallel bus	Bell Laboratories' Unix with internal modifications, one copy per cluster
Autech Corp. *DAC-6000*	Data System Division 1301 W. Copans Road Pompano Beach, FL 33064 305/979-2700	Industrial automation & processing monitoring/ control 100% end user	Dual 68000-based Displaymaster and Dacmaster. Zilog, Inc. Z80A-based Process I/O Modules	Aide process control development system plus read only memory routines in Dacmasters controller and Process I/O Modules
Computer Consoles, Inc. *Power 5/55*	97 Humboldt St Rochester, NY 14609 716/482-5000	OLTP, medium to large companies. 100% end user	Up to eight 68000-based CPUs with 68000-based disk and terminal controllers	Perpos (Perpetual Processing OS), Unix-like, one copy per CPU, plus special control in Inter-Computer Controllers (ICC)
Hewlett-Packard Co. *Systemsafe/1000*	Data Systems Division 11000 Wolfe Road Cupertino, CA 95014 408/257-7000	Industrial automation & process monitoring/ control 100% end user	Two HP1000 Models 60 or 65 working in 'hot backup' mode (16-bit, micro-programmed)	RTE-6/VM, real-time, multitasking, virtual memory, one copy per CPU
Parallel Computers, Inc. *CPU*	501 Cedar St. Santa Cruz, CA 95061 408/429-1338	OLTP, very small to small companies	Three to five 68000s on a bus	Xenis, one copy per CPU
Sequoia Systems *No Name Yet*	1 Metropolitan Corp. Center Marlboro, MA 01752 617/481-9520	Going after Digital Equipment Corp VAX users	Up to 64 68000-based CPUs, probably self-checking, with shared memory	Unix compatible, one copy per CPU (despite shared memory)
Stratus Computer, Inc. *Status/32*	17 Strathmore Road Natick, MA 01760 617/653-1466	OLTP, small to medium companies 70% end user, 30% OEM/IBM Series 1	Each self-checking CPU has two 68000s, each Processing Module can have duplexed CPU and memory and controllers. Maximum 32 Processing Modules on a ring-type local-area network	VOS (Virtual OS), one copy per CPU
Synapse Computer Corp. *Synapse N+1*	801 Buckeye Court Milpitas, CA 95035 408/946-3191	OLTP, medium to large companies 100% OEM now	Up to 28 68000-based CPUs and Tops (I/O processors) working against a shared memory via a duplexed, high-speed 32-bit parallel bus.	Synthesis, one copy in shared memory
Tandem Computers, Inc. *Non Stop II*	19333 Vallco Parkway Cupertino, CA 95014 408/725-6000	OLTP, medium to large companies 88% end user, 12% OEM	Up to 18 CPUs on a duplexed, high-speed, 16-bit parallel bus. CPU is 16-bit microprogrammed.	Guardian, one copy per CPU
Tolerant Transaction Systems *Plus 32*	681 River Oaks Parkway San Jose, CA 95131 408/946-5667	OLTP, small to medium companies. Also real time, and user end OEM	Two National Semiconductor Corp. 16000's in each System Building Block	Transaction Executive, Transaction/Operator interface elements may be replicated in same or multiple System Building Blocks.

The Major Competitors

MEMORY SYSTEM	PERFORMANCE/CPU (MIPS & TPS)	CPU FAULT-DETECTION	RECOVERY SCHEME	ESTIMATED REVENUES & EARNINGS FY '82
32K-bytes per CPU on-board; up to 1M-byte per CPU on Multibus	Approximately 0.4 Mips/Intel 8086 & system. 256 points typical maximum and up. TPS: not relevant	At start of each iteration, three CPUs check state data and vote out bad data. Transient faults thus automatically fixed.	Repaired processor reads programs from read-only link or from disks, synchronized at next voting point	Revenue $1.5M Earnings ($2M)
Up to 8M bytes per cluster (1M byte/board)	0.85 Mips/cluster (company figure), so nominally 27 Mips/system at full expansion. 1.5 TPS/CPU (estimate)	Self-detect via idle diagnostics	Backup cluster picks up load	Revenues Nil Earnings ($2.6M)
64K-bytes to 256K bytes per CPU, parity battery back-up on board Cmos static	Decmaster supports up to 256 process points. TPS: not relevant	Timeouts, cross diagnostics	Auto switchover to backup Decmaster on stall (timeout)	None from Data Systems Division
512K bytes to 4M bytes per CPU, error checking & correction, battery backup. Each of two Intel computer controllers has 512K bytes.	Normally 5.6 Mips (0.7 per 68000) 2 TPS/CPU (ITOM estimate) due to multicopy data base	ICCs time out transactions; bad ICCs detected by CPU voting scheme	Next available CPU completes installed transaction or bad ICC functions.	Revenue $63M Earnings $7.4M (Estimated 80% FT)
256K bytes to 2M bytes per CPU; 1 parity bit/16 bits of data	1 Mips (200K Floating point operation/sec. mod 65); Hence 1 Mips/system. TPS: not relevant	Watchdog timer times out	Peripheral switch flips over, 'hot backup' CPU informed via interrupt	Revenue $4B Minimal FT contribution
Maximum 2M bytes/system	Hard to say until architecture settles down,	Conventional	Manual replace & restart	Revenue Nil Earnings small loss
N/A	Sequoia claims up to 40 Mips at full expansion.	Probably some time-outs on entries in shared memory	Next available CPU picks up stalled transaction.	Revenue Nil Earnings ($3M)
8M bytes effective (16M bytes actual) per per processing module (2M bytes/board),	0.85 Mips/CPU (ITOM estimate); nominally 27 Mips/system at full expansion	Self-checking subsystem pulls out & generates 'red light' interrupt to operating system	'Reeducation' procedures synchronizes repaired module with one that's running.	Revenue $5.4M
16M bytes/system (1M byte boards), Error Checking and Correction	0.7 Mips/CPU; system Mips depend on how many CPU configured. 2 TPS/CPU (ITOM estimate, due to shared memory) if supported by enough I/O Processors	Some time-out mechanism in shared memory	Next available processor picks installed transaction that's been checkpointed into shared memory.	Revenue Nil Earnings ($4M)
8M bytes/CPU (2M bytes/board), Error Checking and Correction	Non-Stop I: 0.7 Mips (Tandem estimates) Non Stop II: 0.8 Mips (Tandem estimate)	Absence of I'M ALIVE message; each CPU must broadcast over Dynabus each second.	Backup process in another CPU picks up transaction from last good checkpoint sent by primary	Revenue $335M Earnings $29M (estimated)
1M byte to 4M bytes per System Building Block	1.5 Mips/System Building Block (Tolerant estimate)	Timeouts and I'M ALIVE messages	Backup System Building Block takes over	N/A

(Continued from Page 37)
licated four times: twice within each of the two duplexed boards. It would have been economically impossible to achieve a similar degree of redundancy with minicomputer technology.

The Stratus approach has immense appeal to prospective customers because it requires no recovery from a failure. The work goes on, using the duplexed subsystem, without missing a beat.

Synapse calls their architecture N+1: by having one more than the N applications processors required to service a given load, the system achieves essentially the same degree of resiliency as one in which each processor is backed by another processor (the 2N approach).

and without the need for check pointing. To avoid the possibility that such a failure will go undetected for a long while, Stratus has equipped its systems with automatic dialers that call in to a support center to report failures. Only when a defective module is returned to service need the system be interrupted momentarily for the resynchronization process.

Up to 32 Processing Modules can be connected together over a ring-type, 11.2M-baud local-area network which can be duplexed. The system supports a global naming convention that allows users to access resources by logical names, without regard to their physical location. Geographically dispersed PMs can be accommodated as well.

Bell Laboratories is also using self-checking approach in its 3B20D system, the latest in a series of Bell Labs/Western Electric processors. The memory systems of the two (duplexed) processors are kept in mirror-image condition by special hardware. One of the processors is the primary, while the second acts as a "warm" standby. The system stops short of implementing the Stratus tight lockstep scheme. A single processor (simplex) version, the 3B20S, is already being offered to the Bell operating companies. The 3B20S and 3B20D may eventually be available commercially, although the underlying minicomputer technology may not compare well with today's breed of microprocessor-based systems.

The Synapse N+1 Concept

A multiplicity of 68000 microprocessors is also used in an FT system from Synapse Computer. The Milpitas, Calif.-based company was founded in late 1980, and is capitalized with nearly $26 million in venture capital. The first two shipments took place in December 1982 and February 1983.

The Synapse architecture consists of up to 28 processors, each based on the 68000 microprocessing unit. Some are applications processors while others are I/O processors. All are "tightly coupled" via a duplexed, 8 MHz parallel bus system to a shared memory system. This shared memory holds the only copy of the operating system, along with work queues, flags and semaphores.

The applications processors form a resource pool which is available to service the transactions being prepared through the I/O processors. These processors, which contain substantial private memories, support dual-ported controllers which service the terminals and the disks. The applications processors are self-dispatching: whenever they are idle, they look up the work queues and assign themselves to service the next ready transaction. A large, fast cache in each applications processor allows them to execute the common operating system without stressing the bus system.

Synapse calls this architecture N+1: by having one more than the N applications processors required to service a given load, the system achieves essentially the same degree of resiliency as one in which each processor is backed by another processor (the 2N approach). The main strength of the Synapse scheme is the extent to which it supports both graceful degradation and graceful growth. Although the shared memory system seems to be a single point of failure, the Synapse software and hardware is prepared to deal with a faulty memory. The system can quickly reboot itself, bypassing the failed memory. Data base consistency and recoverability are assured through a combination of system software and applications programming conventions.

Auragen's Unix Connection

Auragen Systems is another start-up which plans to offer an FT design based on multiple 68000-based processors by using still another architecture. The New Jersey company, founded in 1980, recently unveiled its 4000 system, which consists of up to 32 clusters, interconnected by a duplexed, high-speed bus system. Each cluster is a multiprocessor system in its own right, consisting of a 68000-based Executive Processor, in charge of system functions and bus interface; a Work Processor, utilizing two Motorola 68010s, which executes the user's programs; up to four 68000-based communications processors; and up to four bit-slice disk/tape controllers. A high-speed internal bus system connects these processors and up to 8M bytes of common memory. Peripheral controllers are dual-ported; each may be each attached to two clusters.

A unique feature of the Auragen system is that its Auros operating system is derived from and is compatible with Bell Labs' Unix. The software has been internally enhanced to support the system's architecture, and has been augmented with Oracle, a relational data base management system from Oracle Systems, Inc.

Auragen has also entered into a

technology exchange agreement with Nixdorf Computer AG, of West Germany, which should help Auragen's growth in the FT arena.

Microprocessors are often combined with local-area networks in new general-purpose systems as well as FT systems. Stratus, as noted above, employs a local-area network to interconnect its PMs. Tandem has announced a fiber-optic-based local network to interconnect a number of local nodes, so that more than 16 processors could be brought to bear on larger transaction systems.

The significance of a local-area network as a low-cost, high-speed inter-processor communications facility has not been lost on Tolerant Transaction Systems (TTS), a 1982 start-up based in San Jose, Calif. TTS is developing an innovative solution to the fault-tolerant/on-line transaction processing requirements, involving a loosely coupled arrangement of System Building Blocks (SBB) Each SBB, which is based on a pair of National Semiconductor Corp.'s new NS16000 microprocessors, is connected to a common, duplexed, Ethernet-type local-area network. The system can begin with a single stand-alone SBB and grow to as many as 14. The system's software components can be replicated in one or more SBBs, to provide resiliency and to orchestrate the SBBs into a coherent system which services the load cooperatively.

IBM has taken some steps in the same direction. In October 1982, IBM released a new version of the Real-Time Programming System operating system for the Series/1 minicomputer, which supports the interconnection of multiple Series/1 processors on a duplexed, ring-type local-area network; disk mirroring; and additional distributed control features which could be used in constructing FT systems. Interestingly, only a month earlier, IBM researchers revealed the details of an experimental "System D," an on-line transaction processing system with a strong FT flavor, based on a ring of Series/1s

A local-area network plays a major role in the design being developed by Computer Consoles, Inc. (CCI), of Rochester, N.Y. The $60 million publicly held company, founded in 1968, is a leading supplier of directory assistance systems (DAS) to the domestic telephone companies. The CCI Perpetual Processing architecture is derived from the DAS configuration. The system consists of up to eight 68000-based processors, each of which is connected point-to-point to all the disk controllers, which are also 68000-based. Thus each disk is accessible directly from any processor

The processors are also connected to a duplexed Ethernet-like local-area network, to which the terminal controllers are also attached. A central arbitration box, called the Interprocessor Communications Coordinator (ICC), is also attached to each local-area network; it regulates disk accesses, not local-area network usage, which utilizes Carrier Sense Multiple Access/Collision Detect arbitration.

The full connectivity between the processors and all other elements of the system allows each processor to back up any other processor. The CCI system makes use of this important advantage by supporting a powerful generalization of disk mirroring: the data base can have several mirror images, and the system automatically maintains a "write to many, read from any" policy

Process Control and Industrial Automation

Not all of the new FT activity is in the on-line transaction processing field, although it is the largest and most promising Some companies are addressing FT designs to the process control and industrial automation marketplace.

One such company is Autech Corp., whose Data Systems Division in Pompano Beach, Fla., is a 1980 start-up. Autech is using microprocessor and local-area network technologies to develop a fault-proof system for harsh plant environments.

August Systems of Tigard, Ore., founded in 1978, is pursuing a similar market with its Can't Fail system which utilizes three Intel Corp. 8086-based processors in a triply redundant configuration.

Hewlett-Packard's HP 1000 series minicomputers have long been popular in industrial environments. Systemsafe/1000, announced in October 1982, is based on the somewhat aging HP 1000 models 60/65 from that series.

A unique feature of the Auragen system is that its Auros operating system is derived from and is compatible with Bell Labs' Unix. The software has been internally enhanced . . . and has been augmented with Oracle, a relational DBMS from Oracle Systems, Inc.

Some Open Issues

If one discounts the relatively minor IBM Series/1 and HP 1000 efforts in the fault-tolerance marketplace, the absence of the "big guns" from the FT scene is notable. This absence is puzzling, in view of the multibillion dollar market projections for various FT applications.

The problem faced by the leading mainframe and minicomputer vendors is that, in order to offer fault tolerance on the Tandem scheme, much of the existing software, at both the operating system and standard application levels, will have to be reworked or discarded. Stratus' "pair and spare" scheme could be employed to limit the impact on the software; but such an implementation will have to rely on ad-hoc logic and so will not be able to take advantage of the cost economies offered by

standard, off-the-shelf microprocessors.

Nevertheless, it is probable that certain mainframe and minicomputer suppliers will attempt to offer systems with some FT flavor within the next year or so.

Plug-compatible manufacturers IPL Systems, Inc. and Formation, Inc. have already unveiled dual-processor IBM-compatible systems. IBM executives have hinted at some work along those lines in the large-mainframe area in addition to the Series/1 efforts described above. Digital Equipment Corp. recently introduced a shared disk, shared memory scheme for its VAX 11/780 and Decsystem 20 lines. Gene Amdahl's Trilogy Systems Corp. is developing an IBM-compatible supercomputer that will feature some measure of fault-tolerance at the component level. NCR Corp. is known to be considering a FT system based on its 32-bit chip set (which powers the recently introduced 9300 and 9800 systems), as well as its 68000-based Tower. Hewlett-Packard is believed to be considering how to endow its HP 3000 series with FT features, in addition to the System-safe/1000 mentioned above. Using its Ringnet, Prime Computer, Inc. could provide an FT system similar to the IBM Series/1 ring.

These systems are likely to be far less elegant and convincing than the architectures offered by the new FT suppliers already described, who are not constrained by the need to maintain compatibility with an existing software base.

One development which could change the picture dramatically is the availability of FT features at the chip level. Intel has made a start in this direction with its 432 family. Chips in that family incorporate Functional Redundancy Checking (FRC), which greatly simplifies the design of various "pair and spare" architectures. Unfortunately, the 432 has not been a commercial success so far. Wide availability of FRC-equipped semicustom chips could allow the leading computer vendors to build economical FT architectures that support existing instruction sets, thereby minimizing the impact on the software.

A legitimate question is whether the trend to base FT systems on a multiplicity of low-level processors, begun by Tandem, is not limiting their application. Neither Tandem nor its newer competitors have been able, for example, to penetrate such large-scale applications as the airline reservations systems. Other factors may be at work here, including the reluctance to tinker with massive IBM-based software developed over the years at great cost.

However, as users begin to demand systems to handle 1,000 transactions per second, much more powerful processors will be required. An arrangement involving a pair of very powerful processors would be better suited to this task. In this connection it is interesting to note that the computers used in central-office telephone switching applications in both the U.S. and Japan have always relied on the dual-processor approach.

Fault-tolerance at the hardware level is well within present technology. One can never have absolute protection against faults; but by investing more resources in the system, it is possible to increase its depth and coverage. Depth is a measure of the survivability of the system in the face of multiple failures, while coverage implies the range of possible failure types with which the system is equipped to deal. The probability that a fault will have an impact on the end user can be reduced to ao acceptably low level.

However, experience has shown that the primary cause of problems io FT systems is not unexpected hardware faults, but rather bugs in the operating system, typically discovered through some sequence of events triggered by an error on the part of the user. Software fault tolerance is a much more intractable problem, because the design of software is still mainly a creative process. Some theoretical solutions have been proposed; for example, "correctness proofs" which use mathematical notation and procedures to express the goals of the program and to prove that it accomplishes only these goals.

Unfortunately, except for very simple subroutines written in a very structured fashion (with a very limited set of control constructs), the task of proving the correctness of typical programs is so onerous as to make it totally impractical. Other solutions have been proposed, but they are even more limited. Progress in this area awaits a breakthrough in the general discipline of software engineering.□

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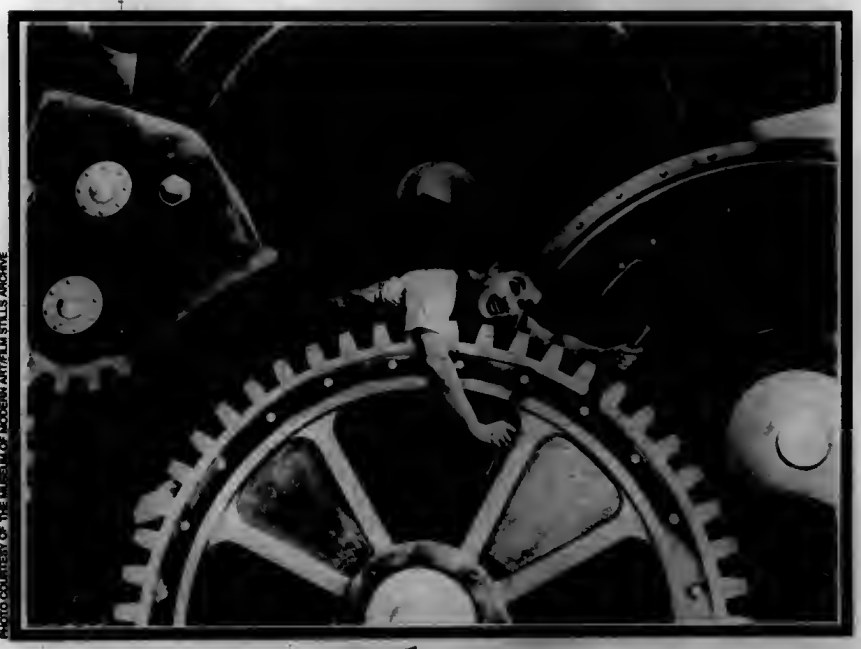

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Who's Taking Care of The System?

The invasion of peripherals and smaller computers into user departments is changing the staid complexion of maintenance.

By John Harnett

This year, owners of computer equipment will spend an estimated $8 billion to $10 billion on maintenance.

The traditional large computer manufacturers perform the majority of this service through their captive service organizations — maintaining and repairing the equipment they have built and marketed.

However, during the 1980s the complexion of computer maintenance will change as micros and accompanying peripherals flood offices. In order to keep labor costs down, necessary due to stiff price competition among sellers of microcomputer equipment, many vendors in this arena are shifting a good portion of the onus of support to the user, while at the same time touting their products as "easy to maintain." Hence such innovations as mail-in, drop-off, walk-in service and self-service have resulted in a smorgasbord of maintenance alternatives varied enough to confuse even the most sophisticated end-user.

But the truth of the matter is that medium- to large-size companies expect and are willing to pay for on-site service for the full range of computer equipment installed in their operations. Unlike vendors, these businesses are not generally concerned about cutting the cost of computer maintenance. Generally, maintenance costs 5% or less of the annual DP budget and is a minor headache compared to the more momentous problems faced by the DP executive.

Despite frequent occurrences of breakdowns in equipment, particularly micros and fussy peripherals, most business operations are willing to pay for high-quality on-site service for the entire spectrum of equipment installed in the company.

This difference in attitude towards maintenance between some vendors and users, which was created in part by the microcomputer explosion, will spur demand for service from third-party maintenance service firms and dealers willing to take on full service responsibility for selected equipment.

Independent or third-party maintenance organizations began operating in the late '60s and early '70s as a result of two changing developments in the marketplace. The first had to do with manufacturers' product strategies. As new products were introduced, vendors raised maintenance prices on older models to encourage migration to new products. Such aggressive pricing opened an opportunity for third-party maintenance firms to offer a price incentive to users.

The second significant development was in plug compatible peripherals. Users built systems by combining products of various manufacturers, but these vendors generally serviced only their own equipment. Third party maintenance firms began to offer single source services to users of large, mixed systems, and this particular development has spilled over from the traditional large scale data processing computer environment to the micro revolution of the past few years.

Many of today's manufacturers will not, or simply cannot afford to, invest in both the manpower and capital required to establish effective support service for their products.

Some established manufacturers are divesting their service operations in order to invest resources in marketing or research and development. Rexon Business Machines Corp. and General Automation, Inc. are two companies that have opted to do this.

Major manufacturers offer service agreements for their own smaller computers and their peripheral equipment as well as their high-end products. However, some companies, such as Xerox Corp., are expanding their maintenance operations to service products from other vendors, recognizing maintenance as a potential revenue producer.

The first step in making a maintenance decision is to realize that service plays an important role in the relationship between the company and its computer. Before even considering maintenance alternatives, the company must first assess its present computer needs and realistic future requirements so that it can select equipment adequate for the job.

Although some individuals and even businesses have purchased equipment without clearly evaluating the amount of time it will be used, it generally develops that, once in place, the machines are deluged with applications. Many service problems arise from overuse of equipment not intended to handle the workload.

Thus, even for computer-age technology, the old adage, "Penny wise, pound foolish," holds true. Buying an economically priced printer, for example, at first may save money, but could eventually result in huge operating costs due to frequent maintenance problems caused by overloading.

Consideration of maintenance costs should be part of the purchase decision process. Shop around and compare maintenance costs — they can vary from vendor to vendor. In some cases maintenance cost can be used as a measure of equipment reliability. For example, if two printers that are very similar in speed and printing technology have a 25% differential in maintenance fees, this may indicate a problem with reliability.

Since a maintenance operation will tend to offer service contracts on those products that are relatively reliable, it is a good endorsement when a product can be serviced by one of the name-brand third-party organizations.

Also, service contract prices can be a measure of a product's failure characteristics. The expected mean time between failures, and the expected mean time to repair are significant components of maintenance pricing.

Since service costs will be in direct proportion to these factors, these prices will provide a good idea of what experts in the industry think about the quality of the product under consideration.

In general, CPUs are relatively stable items and the annual service charge for this equipment can be as low as 5% of the selling price. Yearly service charges for peripherals and communications equipment tend to run around 15% to 20% a year. Likewise, letter-quality printers and plotters generally sport relatively high maintenance price tags largely because the electromechanical features of these products are more readily prone to failure.

As microcomputers are configured with hard disks, expect maintenance for these systems to run 12% to 15% of the selling price.

Equipment that has an interface involving firmware is a potential

maintenance problem

In addition to the cost of service, there are other maintenance factors to consider when purchasing equipment. Convenience and reliability of the organization providing service should also be evaluated. The vendor should be local enough to provide timely service when needed.

The user should also feel fairly confident that the service organization — whether it is the manufacturer, a third-party servicer or a local dealer — will be in business at least as long as this system is in operation.

Moreover, if systems are configured with products from multiple vendors and serviced by several organizations, a method must be developed for avoiding a finger-pointing situation that can arise when different organizations service different components of the system.

Most of the larger manufacturers will service their own equipment but will not support "foreign" peripherals — any components added to the system not manufactured by them. Some third-party operations repair a limited menu of products and farm out those components they do not handle.

Many larger third-party organizations, however, service a broad product selection of processor units and peripherals so that an end-user can assemble a personalized system and be assured that all the parts are serviced by one company. In this situation single-source servicing becomes the most efficient and economical option.

Product reliability is increasing, but no matter how highly engineered a product is, chances are it will eventually need servicing. In addition to overloading, maintenance problems also arise from first-time or unsophisticated system users who are unsure of operation and often cannot distinguish between a hardware and software problem.

Mishandling of software, such as an inadvertent erasing of files on floppy or hard disks, is another frequent cause for systems breakdown. Be sure all those who will be using the equipment have a basic knowledge of handling and operating procedures. In addition, moving small desktop-type equipment around without ensuring that it is properly secured can be another source of maintenance headaches.

Despite frequent occurrences of breakdowns in equipment, particularly micros and fussy peripherals, most business operations are willing to pay for high-quality on-site service for the entire spectrum of equipment installed in the company. Although some business systems may have been designed with plug-in capability and allow portable servicing, if they have been incorporated into a local network or telecommunications system, it might be difficult and risky to unplug the unit for servicing.

However, just as technology is becoming more sophisticated, maintenance techniques are also moving ahead with the times.

Board swapping will be utilized to an ever greater degree in the future to the point where repair as it is known today will be virtually invisible to the user. Almost all on-site service will be done at the module level through board exchange by a technician or the end-user himself. Substantive repairs of assemblies will be done off-site at service centers. There, advanced test equipment and diagnostics will facilitate an assembly-line approach to even the most complicated machinery, thus making repairs faster and cheaper.

Remote diagnostics is a current popular industry buzzword that refers to a system's ability to transmit its operating status to, or to be actually operated from, a service center located off-site. Remote diagnostics permits the service organization to get an advance look at the problem before dispatching a technician to the site. This results in more efficient service and eliminates the need for the technician to carry a wider than necessary range of parts and equipment to deal with the problem.

While this capability has been incorporated in some mainframe systems for some time, its application to smaller systems has been hindered by cost factors. Generally, remote diagnostics is not appropriate for systems below the size of a mid-range minicomputer such as the Digital Equipment Corp. PDP-11/44.

Remote diagnostics can eventually result in lower operating costs over the life of the system, but building this capability into the system increases the unit cost. Its most valuable use is for systems which have complex system software. Statistics estimate that remote diagnostics can eliminate 70% of the service calls for systems in which it is installed. Amdahl Corp.'s systems and DEC's VAX series exhibit a significant amount of remote diagnostics features.

If a diagnosing system is detailed enough for in-depth analysis of a system, theoretically it has the capability to reach and alter data, thus facilitating computer crime.

For the time being, there has been no substantial move towards more remote diagnostics in the micro industry, although it is definitely a future trend, particularly in network environments.

Remote diagnosis does have some drawbacks. Suppose the system is operating in a communications environment and the breakdown occurs in its communication mode. Remote diagnosis cannot be utilized because the system lacks the capability to communicate.

Also, remote diagnosis systems could be utilized for computer crime. If a diagnosing system is detailed enough for in-depth analysis of a system, theoretically it has the capability to reach and alter data, thus facilitating computer crime.

A spin-off of remote diagnostics called on-board or self-diagnosis is becoming more popular. Already present on an elementary level in some systems, these techniques allow the users to take a machine's "pulse." They can then relay the information to the service center or make their own repairs, which may involve replacing a faulty board with an operational one. The faulty board can then be forwarded to a repair depot for inspection and possible repairs or exchange.

Technology will eventually advance to the point where disposable machines, such as today's hand-held calculators, are a reality. Priced in the $100-and-under range, it may be simpler and less expensive to replace them rather than to repair them.

End-user self-maintenance will be especially applicable in more remote locations where on-site servicing might be delayed or too costly, or both.

However, in order to run the diagnosis accurately and make the repair correctly, this will require an investment in a parts inventory as well as a basic expertise not currently present in the ordinary business environment. The larger, more complex systems will still be entrusted to the service organization.

Even with technology improving as rapidly as it is, its effect on reducing the need for service will be minimized by a number of factors.

The more tasks the newer, more efficient machines can accommodate, the more heavily they will be utilized and the more of them there will be. Also, despite the fact that the end-user computing market is becoming more computer sophisticated, there will always be service problems which arise from unfamiliarity with the new systems.

However, the high cost of on-site maintenance has created a need for less expensive alternatives, particularly for the smaller end-user.

Mail-in service has been available to the end-user for quite some time. Although the cost is significantly less than on-site service, it is only really practical for those end-users who are not concerned with machine downtime.

Walk-in or drop-off service is a relatively new phenomenon with several maintenance organizations providing convenient drop-off locations. In some cases, these sites are actually service centers, or sections of a repair facility that have been converted to handle retail operations. Others are simply depots where the machine is taken in and then forwarded to a service center for repair.

Carry-in maintenance typically costs 20% to 30% less than on-site service. Although the waiting time is considerably less than for mail-in service, carry-in usually involves a period of from one to five days. It is important to note also that not all products are serviced at these centers.

In the future, computer service decisions will be more and more dependent on the price of the equipment. Technology will eventually advance to the point where disposable machines, such as today's hand-held calculators, are a reality. Priced in the $100-and-under range, it may be simpler and less expensive to replace them rather than to repair them.

Exchanges will probably grow in popularity for equipment in the medium price range. A flat rate will be charged to swap the damaged unit for a new or repaired one.

Even for the more expensive units, such options as on-site, mail-in, pick-up and drop-off service will be available.

Mainframes most likely will continue to be maintained, predominantly by the manufacturers. Everything else will be up for grabs.□

Harnett is director of planning and development for TRW, Inc., a major supplier of third-party maintenance services located in Fairfield, N.J.

Disaster Recovery Planning

Insuring Against the Unthinkable

By Gary Tarkington and Walter Ulrich

Computer systems and information resources must be protected. Disaster recovery planning provides a mechanism to keep a company going in the event of a computer catastrophe, whether it be from internal or external sources. The rise of distributed systems, advanced communications services and office automation have emphasized the necessity for developing disaster recovery plans.

The importance of computers and information systems to a corporation is obvious, but what would happen to a business if the plug were pulled on the information systems?

According to some estimates, a typical company would lose over 40% of its operational effectiveness by the fourth day of a major computer outage. Less than 25% of the company's operations would continue to function after the first week and less than 10% after the second week. Clearly, a complete information system interruption would be devastating.

The potential loss from a computer calamity is so great that many companies have developed data processing disaster recovery plans. The disaster recovery plan insures that the processing of critical functions can be resumed quickly after a disaster.

While hard data is not available, it has been estimated that less than half of the Fortune 1000 companies have a plan of any kind in place. In some companies, the plan is only a "coffee-table" piece designed to satisfy auditors. Probably only 25% to 30% of these large companies have a plan that would offer genuine assistance. For medium-size and smaller companies the record is much worse.

Disaster recovery planning is a well-thought-out and deliberate effort to prepare for the unthinkable. During the planning process, arrangements are made so that necessary resources will be available even if the computer room is destroyed. Detailed instructions are prepared so that everyone can react effectively. The disaster recovery plan is the definitive guide to restoring valuable information resources.

A disaster occurs infrequently enough that many DP managers feel that it will not happen to their organization. Unfortunately, disasters can and do happen. The rash of unusually severe weather on the West Coast this past year caused serious interruptions for several companies. Hurricane Iwa also made data processing operations in Hawaii painfully aware of the need for backup power.

But weather is not the only cause of disasters; fire is another. Even when the fire damage is negligible, the smoke alone can destroy a computer system. Water damage can be caused by fire protection equipment in this instance, as well as a consequence of severe weather conditions or a plumbing failure. Other accidental causes include earthquakes, mud slides, structural collapse, power failures, human error or vandalism.

These dangers or hazards represent a threat or risk of loss to a business and its computer center.

The reason for disaster recovery planning should be clear. Calamities can and do occur that render the information resource systems inoperable. The failure of these systems can destroy a company. No management information systems (MIS) director has the authority to take that kind of risk and no prudent executive would want to.

Why have so many companies avoided preparing for a disaster? The answer stems from confusion. Companies do not write such plans every day and are unsure of how to go about it. Most companies underestimate the effort involved in such a complex task. Other companies try to get started, but make a false start. Little progress is made and the planners get discouraged.

However, disaster recovery planning is like insurance, and no company would allow their insurance policy to lapse.

The evolution of new information processing technology makes the need for disaster recovery planning much more acute. Even some companies with well-thought-out disaster recovery plans are finding out that those plans are becoming obsolete as information processing technology expands throughout their organization.

Communication networks are an obvious example of how technology is complicating disaster recovery planning. In the days of batch data processing, after the data was stored at the data center the job was done. The input and output were picked up and delivered to the center by standard transportation methods. While it was cumbersome, it was easy to replicate.

Today, users are on-line to their computer systems. Complex networks, both local and remote, link users and computers together. Powerful communication front-ends, advanced telephone switches and the telephone company plant all interact. Rebuilding the network can be as big a job — or bigger — as rebuilding the physical facility.

Distributed data processing means that important information might be dispersed to computers throughout the company. Away from the corporate DP center, there may not be the same care about backup and recovery. The old saying, "Out of sight, out of mind," holds true. Yet, what happens if a disaster occurs damaging that remote computer.

Personal computing and word processing raise another new risk. The users of such products are not of the DP department. Who, among user departments, is insuring that specialized programs and critical information is being backed up? Are procedures being written so that personal computer functions can be performed if the primary user is not available? How will the confidential information and personal programs that are on diskettes sitting in desk drawers be replicated in the event the company's building is burned down? This is already a problem in some companies and it will have devastating impact as intelligent workstations sweep through offices during this decade.

These technical changes require new ways of managing information resources. It would be naive to think that they do not impact disaster recovery planning.

There are five key phases in disaster recovery.

- Preparation — anticipating the disaster.
- Protective Reaction — as disaster is occurring.
- Recovery Reaction — immediately after the danger.
- Recovery Operations — operating critical systems.
- Normalization — return to original capability.

Using a fire as an example helps to provide a simplified overview of how this disaster recovery plan might work. The first phase, preparation, is analogous to having established exit routes and having held fire drills. Protective reaction involves the actions needed to

minimize injury and damage during the disaster; in this example, people leave the building using their assigned evacuation routes and avoiding elevators.

Recovery reaction is the immediate assignment of individuals into preestablished teams to assess the extent of the damage and to implement those portions of the plan that will put critical functions back into operation quickly. Recovery operation is the operational mode under which the company's business is transacted until complete and normal operations can be restored. The final phase is the return to permanent facilities and normal operation. In addition, some would formally recognize a sixth phase whereby the recovery plan was updated.

Extending that analogy to information processing, the first phase is the step where provisions are made, including the writing of the disaster recovery plan. Activities for each of the next four phases is detailed in that plan.

Phase two, protective reaction, is the positive action that takes place while a disaster is occuring. The primary purpose of this phase is to protect human life and to limit physical damage. Without a planned response, the chaos from the disaster can be more harmful than the disaster itself. The shutting down of equipment and the orderly evacuation of personnel examples of appropriate protective measures.

Phase three, the recovery reaction, picks up where the second step ends. Employee teams assess the damages, institute recovery procedures, and begin building critical processing functions. If the data center is unusable, this phase is where the off-site copies of programs and data are sent to an interim operations center. Hardware and software resources, communications, facilities and people are brought together. The corporate data base is rebuilt. Processing resumes.

Phase four, recovery operations, is the period during which the data processing function is performed using temporary facilities. During this time, processing should be orderly. Critical functions are processed routinely without special management attention. Once the processing routine has been established, attention can be focused on establishing a permanent data center.

Normalization occurs when data processing returns to its permanent location and all information systems are restored. The evolution to normalization includes a conversion of processing from the interim processing center to the normal data center. Everyone has been through a conversion, and this conversion is no different. It is a big job and must be managed well. As part of normalization, the disaster recovery plan would be updated. The success of each of these phases depends on how well the preparation was done. "Be prepared" is a motto well worth adopting.

The first step in writing a disaster recovery plan is understanding what applications are critical to the organization. An application inventory is taken of all computer systems and a risk analysis performed on each one. Priorities are put on each system. Superficial inspection may result in putting emphasis on the wrong applications. Payroll seems like the most obvious example of a system which must have top priority. However, in a disaster it might be possible to write estimated payroll checks based on the previous payroll period registers.

Other systems such as the royalty payment systems found in the energy industry and order entry systems in the distribution industry or manufacturing inventory may have much greater priority. Both quantitative and qualitative factors must be considered.

After the critical systems have been defined and their priorities established, it becomes possible to specify the programs and data to be safeguarded, and to what level. In addition, alternate processing facilities and recovery operation centers can be intelligently evaluated. Mutual aid agreements with other user companies can also be considered, but formal written agreements are needed.

At the same time, policies and procedures are written for data processing staff and for users so that each knows what is expected when disaster strikes. Training is an essential element. A detailed manual is prepared for each working group. Everyone must react in a prescribed way when a catastrophe occurs, otherwise chaos will ensue.

Personal computing and word processing raise another new risk. The users of such products are not of the DP department. Who . . . is insuring that specialized programs and critical information is being backed up?

Everyone also includes the users. If the headquarters building is demolished it is not good enough just to restore processing. How will users access processed data? Since some systems will be suspended during recovery operations, I/O methods will change.

Some business functions will revert to manual methods. How will this be accomplished in temporary facilities? A complete disaster recovery plan has a broad perspective.

After the disaster recovery plan is completed, it must he tested. The test must simulate a real disaster as closely as practical without the costly interruptions that would occur had a real disaster taken place.

The internal auditor plays an important role as an objective evaluator of the test results. The internal auditor must also insure that the disaster recovery plan is kept up to date with changing technology, user application and business

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environment. The external auditor also has a role to play as an impartial, outside observer. On the other hand, the auditor cannot become enmeshed with the development of the plan without endangering the plan's objective as well as the independent frame of mind needed to evaluate the finished plan effectively.

There are several misconceptions and mistakes that are often made in disaster recovery planning.

Cookbook Approach — Disaster recovery planning is very specific to the business, technical and organizational environment of the company. A cookbook approach, which infers a general step by step way of doing the job, doesn't work. Although there are certain steps which every company must follow, the systems that are essential for survival in one company may be luxuries to another firm.

The "Solution First" Approach — Many companies become enamored with evaluating disaster recovery products and services: alternate processing facilities, reserve operation centers, empty shells, mutual-aid pacts, backup storage sites and so on. All too often, the recovery approach is decided before the real needs are assessed. Trying to match problems to a solution is backwards. Assess the situation, evaluate the risks, establish evaluation criteria; then study the alternatives and make the selection that best meets that criteria.

Neglecting the User — Risks can neither be analyzed nor can priorities be established without the close consultation of management and end users. The final plan is not implementable unless recovery procedures and manuals are available to the users. Furthermore, users must be part of the ongoing testing of the plan.

The Static Plan — The "do it once and then admire it" approach to disaster recovery planning is the worst possible choice. Information processing is changing in every organization. This fact must be dealt with frequently if your organization is to be protected effectively and realistically.

An out-of-date plan will probably fail in an emergency. The cost for developing the plan has been wasted. Worse than that, there is a false sense of security. Such plans must be dynamic and must be kept current. When the plan is updated as part of ongoing development, it becomes a routine part of every project.

Doing Nothing — The ostrich never escapes danger by sticking his head in the sand, and one can be sure that the ostrich is always blind-sided when disaster strikes. When you don't have a plan, you are playing a dangerous game in which the odds are stacked against your company. That is a risk that is avoided by prudent and diligent businessmen.

Unmanaged Planning — Many disaster plans take too long, cost too much, or are never completed because of mismanagement. Disaster recovery planning is a major (but not Herculean) project. Its development must itself be carefully planned. Milestones must be established and tasks must be assigned. Progress must be monitored. Management must demand results.

Lack of Resources — Good planning and monitoring is essential, but not sufficient by itself. The right people and the necessary resources must be assigned. The project manager must have the right combination of business, technical and disaster planning skills. And the planning effort must be his first priority.

Fanaticism — Beware of the disaster recovery planning effort that looks like a Cecil B. DeMille extravaganza — "A cast of thousands, ten years in the making . . ." A complete plan is necessary, but do not lose sight of practical considerations.

Disaster recovery planning is the conscientious development of a contingency plan to insure that critical information resources are protected in the event of a calamity. Such a plan is necessary because of the importance of information and communications in the modern business. As time goes on, we will become even more reliant on computerized information systems. The technology is becoming more dispersed so that careful planning is all the more important. Anything less is negligent.

The steps in disaster recovery planning are logical. The current situation is analyzed and critical systems are identified. Detailed plans are made and documented so that critical functions can be restored in order of priority.

The whole project is performed with a focus on meeting real corporate needs. Product selection comes only after those needs are understood. Actual testing of the plan caps off the development effort and provides an important quality control check. Once developed, the plan is maintained to ensure that it is current.

The likelihood of a serious computer outage in any one company in any one year is slight. However, for a successful company, a computer calamity is ultimately inevitable. Information is a valuable asset and it must be protected. If you already have a plan, establish the mechanism to be sure it stays current. If you do not have a plan, it is not too late to begin, but begin soon. Once a disaster strikes, it will be too late for you and perhaps for your company.□

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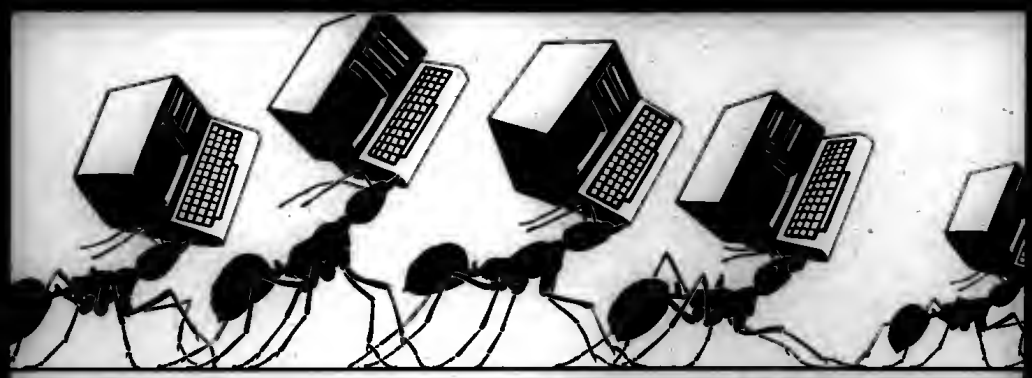

THE MICRO PARADE THE MICR

By Esther Dyson

The first thing to understand about personal computers is that no system is perfect; you are looking for a personal computer that suits you. If one system was clearly better than all the others, you would already know about it.

The first thing to do in the selection process is to determine how the system will be used. Will the personal computer be used by one person or will it be shared? Will it be hooked into a mainframe or a commercial data base? What applications will be performed on the machine: word processing, spreadsheets, illustrated texts, dunning letters, customer account management, sales analysis, phone list maintenance or several of these together? How often will the systems be used — all day or for frequent five-minute stretches? Will telephone management be incorporated into the system? How much data will be stored on the system?

Somewhere in the world there may be a personal computer that precisely meets your needs. Unfortunately, there are so many it may be difficult to find the one that's just right. Even worse, it may come in little pieces: Company A's CPU; B's disk drive; C, D, E and F's software; and Dealer G's support.

The dealer who sells the machine can be the kingpin in helping a user select and fit together all the diverse components of the system. He should be ready, willing and able to fix any problems, whether they be a new piece of software or a disk drive overhaul.

Hardware

The major news in hardware these days is 16-bit microcomputers. This architecture offers the capacity to handle more data and far more complex programs than the traditional (since the late 70s) 8-bit architecture. Eight-bit machines, such as the Apple Computer, Inc. Apple III, can actually be very sophisticated, supporting hard disks and multiple users, but all other things being equal, a 16-bit machine is probably preferable. Most of the interesting new software available is written for 16-bit machines — in particular for the IBM Personal Computer.

Several firms now offer a variety of 8-bit and 16-bit machines. Some, like Digital Equipment Corp.'s Rainbow and some TeleVideo Systems, Inc. systems have one of each, enabling them to run both kinds of software. Add-in cards, such as Microsoft Corp.'s Softcard, also include a Zilog, Inc. Z80 microprocessor, enabling Apple computers to run Digital Research, Inc.'s CP/M software. SRItek Computer Systems offers a Motorola, Inc.'s 68000 card, enabling the IBM Personal Computer to run a 68000 version of Bell Laboratories' Unix and other 68000 software.

The number of bits determines, among other things, how much software or data the computer can handle at one time and is a measure of the system's potential.

Theoretically a personal computer could have unlimited external storage, but in practice most systems now have two floppy drives, and frequently a hard disk drive as well.

With IBM's announcement last March of the XT, which comes with a 10M-byte hard disk, there has been an enormous gain in the popularity of hard disks — as well as of software which makes use of them. Should your computer have a hard disk? Certainly it is an enormous convenience, albeit an expensive one, at $2,000 to $3,000 a unit. Having a hard disk eliminates the need to keep swapping (let alone keep track of) a collection of floppy disks (although it's wise to store each day's work on a floppy disk just for back-up purposes).

Besides overcoming capacity limitations and disk-swapping required with floppy disks, the hard disk

ILLUSTRATION BY GREG WENZEL

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also has much faster access time. Five seconds vs. half a minute to load a file from a disk sounds petty, but it isn't if you keep on switching from one file to another. Another aid in doing this is a multitasking operating system, such as Concurrent CP/M or Unix, which allows switching from application to application. For someone who has been working on a single Visicorp VisiCalc model all day, however, this feature would be an unnecessary expense.

In addition to the usual array of printers and disk drives, personal computers are now beginning to sport some more adventurous accessories. Voice systems of various capabilities are beginning to appear. The most ambitious of these, offering voice recognition as well as the easier-to-create voice output and playback, will be available from Texas Instruments, Inc. on its Professional Computer this fall.

Another analog input device, the "mouse," is gaining popularity. The mouse, first widely used on Xerox Corp.'s Star system, lets the user move the machine's cursor by moving the mouse, a small object that contains sensing devices on a flat surface. The mouse translates these movements onto the screen and moves the cursor correspondingly. The mouse can be used not just for graphics but also for selecting text, items on a menu, entries in a spreadsheet and so forth. However, using a mouse is a question of individual preference.

In addition to the Star, which pioneered the mouse in the general marketplace, current mouse-oriented systems include Apple's Lisa and hardware using Visicorp's VisiOn or some of Microsoft's Multitool series of software packages. (Microsoft's user shell has not yet been announced, but it too will use a mouse.)

What really gives a personal computer its personality is software. The largest existing base of software is probably that written for the Apple II; second is that for the large array of CP/M-based machines. However, most of the newest, broadest featured software is now being written for the 16-bit Personal Computer, running under PC-DOS, IBM's operating system for that machine.

All of the hot new software —such as Lotus Development Corp.'s 1-2-3; Context Management Systems' Context MBA; Visicorp's VisiWord; Bruce & Jones Program Publishers' Wordvision; Software Arts, Inc.'s TK!Solver; and Microsoft's Multiplan — is written for the Personal Computer first and for other machines later, if ever.

Software is rapidly improving, so it makes sense to buy state-of-the-art products if possible. Simultaneously, software writers are becoming more sensitive to the growing installed base of personal computers and are designing software so that a previous investment is not wasted. For example, Multiplan and 1-2-3 will accept VisiCalc files (but not vice versa); Personal Computer software can generally run on the XT (but not always vice versa).

Thus as long as you have a relatively popular machine and relatively popular software you are somewhat protected.

All in all, it is getting easier to make different packages work together. This is all part of the trend towards integration, an attribute that comes in many forms. There are two kinds of integration: cosmetic and fundamental. Cosmetic means that a group of programs all has the same prefix or suffix — Visi-, Multi-, Super- , Easy- or -Star, for example — and the same user interface — all the commands, menus, documentation and so on come in on the same format for ease of use.

Fundamental integration means that data can be shifted easily or, better yet, automatically from one module of an integrated set into another. For exam-

ple, imagine a VisiCalc model that automatically updates revenue projections when a company raises its prices.

Another form of integration allows the user to look at different sets of data simultaneously. For example, seeing parts of pages two and three of a single document or seeing both the letter being written and the sales report being quoted from in different pans of the screen. These different views are called windows and are rapidly becoming a fashionable feature of the newer systems.

Integration has been getting a lot of press lately, for obvious reasons. All the major productivity package players — Visicorp, Microsoft, Sorcim Corp., Information Unlimited Software, Inc., Micropro International Corp., Peachtree Software, Inc. — are touting it. There's Apple, whose Lisa system is so integrated that it comes complete with hardware. Finally, there is a host of "environments," packages that incorporate several separate applications and integrate them. The most comprehensive of these is Visicorp's VisiOn, announced for the Personal Computer last November and to be available this October — with adaptations for the DEC, TI and Wang Laboratories, Inc. professional computers to follow.

With VisiOn and the related applications (which Visicorp will supply, although other vendors are also being encouraged to write packages for the VisiOn environment), the IBM micro will offer most of the same features as Lisa at a lower cost and on a more familiar machine.

Other contenders in the integration race will include Microsoft, Micropro and Digital Research, with full-featured products not yet announced. Meanwhile, Quarterdeck Systems will offer Desq, which provides for some data transfer among applications and a lot of commonality in the user interface. Alpha Software Corp., with its Data Base Manager II, provides a complement to Desq, allowing for transfer of data among different applications.

Is all this integration necessary for you? It depends on how you intend to use your personal computer. If only one function is needed, such as word processing, then a good word processing package is all that is required. If several functions are going to be performed, mostly one at a time but with some data sharing, a set of integrated applications from the same vendor, or the set of popular applications linked by a data transfer package, will probably be the best option. But if tasks are being constantly shifted from one to another, and you would like to look at a letter while working on a sales plan, something like the VisiOn package or the Lisa system is appropriate. But remember, what starts out as a convenience soon becomes a necessity.

IBM's Personal Computer

Several currently available systems are popular examples of what is on the market today. The most significant trend these days is the supremacy of the Personal Computer, which epitomizes security and vendor reliability. Next is Apple's Lisa, an innovative, exciting machine from a company that still gives some old-line DP managers hives. Then there's the TI Professional, one of the many MS-DOS machines that's fighting IBM by offering extra features as well as a lower price.

The user cannot go too far awry with the Personal Computer because most of the good software is being written first for the IBM Personal Computer, and for everything else as an afterthought. The Personal Computer itself is a solid, Intel Corp. 8088-based machine, with a list price which was recently dropped 15% to $2,633 (for the two-disk version). Corporate purchasers who buy in volume, moreover, can usually negotiate a discount of up to 30% at 250-plus quantities from a local dealer or even from IBM itself. The basic system comes with 64K bytes of random-access memory (RAM), the XT starts with 128K RAM and includes a 10M-byte hard disk for $4,995. For most personal uses, this is ample. There is a wide range of software available for the system from IBM and third-pany sources, including, later this year, VisiOn, which will make the personal computer almost an equivalent of the Lisa.

The Personal Computer's chief flaw is probably its relatively low power commpared to all the other Motorola 68000-based machines. But most personal computer users are more concerned with the quality of the software they use than with its execution speed. Another failing is the lack of a good, standard network system, but that's an issue now being addressed both by IBM itself and by a host of add-on vendors such as Tecmar, Inc., Visicorp and 3Com Corp.

What more needs to be said about the IBM Personal Computer? It is the standard against which all the others are measured. And it comes with IBM's name and the assurance of support from a dealer carefully qualified by IBM or from IBM itself.

Apple's Lisa

The Lisa is Apple's new flagship machine and was introduced this past spring. Priced at $9,995, it includes a hard disk (Apple's familiar 5M-byte Profile) and everything else but the printer.

Lisa uses Motorola's powerful 68000 16-bit chip to provide an extremely flexible, comprehensive single-user system that's accessible to the novice. Most of its several applications (word processing, graphics and so on) can pass data from one to another and several files can be seen on the screen at the same time through the use of variable-size, overlapping windows.

Lisa operates like a desk top on a screen, with tools and files all neatly laid out. Rather than being stored in an inaccessible computer file that can only be called up when the screen is wiped clean of

the work at hand, Lisa's files can be displayed permanently at the edge of the screen so that the user sees immediately what's available. Likewise, the tools are visible — mailbox, wastebasket, clock, printer and calculator. The user can enter data and text in the normal way through the keyboard, but manipulates them with a mouse, using it to select documents and text or data from available documents and functions fron a wide selection of menus.

Except for Lisadraw and Lisaproject — which are virtually unrivaled and put the superb graphics of the monochrome 12-inch bitmapped display (720 by 364 pixels; about twice the resolution of the unimproved Personal Computer) and dot matrix printer ($695 extra) to good use — Lisa's applications are pedestrian versions of standard functions that have been done better elsewhere. It is only their integration with each other (such as it is) that makes them unique — for the moment.

But this is a uniqueness most useful to the user who never works very long or deeply at one task, but rather shifts around and needs a flexible system that will accommodate him.

In contrast to its Xerox progenitor, the Star, which can be used only as part of a network, Lisa at present is limited to stand-alone operation (with optional remote communications capabilities) and cannot share resources with other machines. However, the company has recently announced a joint development agreement with Cullinet Software, Inc., which will reportedly give Lisa easy access to most mainframe data bases sometime next winter.

As noted, Lisa costs $9,995. An equivalent Personal Computer might start at about $6,000 with a 10M-byte disk drive, but its internal memory still limited to 512K bytes.

On top of that, the user would have to add applications and VisiOn, with mouse and interface, for a total of approximately $7,000 or $8,000.

But it's not just cost that's the issue. Regardless of the cost, the risk applies to the entire system in the case of Lisa; to the software only in the case of the IBM Personal Computer equipped with VisiOn. First, many prospects may already have a Personal Computer and some add-ons, so all they have to do is buy the VisiOn software and mouse. And if they do not like it, they still have the Personal Computer and the hard disk.

The TI Professional

Texas Instruments announced its version of the proliferating "professional computer" last spring. With some encouragement from TI many software houses have already transported their Personal Computer software to the TI Professional, which runs on Microsoft's MS-DOS operating system — close to the PC-DOS, but not quite close enough to obviate software conversion. Still, there are a lot of announced packages that are not yet available, so it's wise to confirm software availability before putting money down for the system.

The system comes with a full array of features and a price ($3,145 for the two-diskette version, including a monitor and $700 worth of free memory added in response to IBM's 15% price cut) that makes it attractive beside the Personal Computer. Its 8088 chip enables the system to run MS-DOS.

TI also offers, for an extra charge; CP/M-86, Concurrent CP/M-86 or the UCSD p-System. Beyond that, the machine sports 64K bytes of internal memory, expandable to 256K bytes; a 320K-byte disk drive, with room for a second or for a 5M- or 10M-byte Winchester; a 12-inch monochrome 720-by-300 pixel monitor; and a five-slot expansion bus.

However, TI has also promised two extra features for the Professional that should make it more than just a pale copy of the IBM Personal Computer. These promises both have to do with this year's buzzword: the user interface.

Although TI had to use an Intel chip for this standard-adhering machine, the company has put technical virtuosity to good use by offering speech recognition (where most competitors offer only speech output or recording). The system's voice management system, scheduled for delivery in the third quarter of 1983, will include automatic dialing, telephone message store-and-forward, telephone answering and word recognition. The electronics, which includes several TI microprocessors, 32K bytes of RAM, 1K byte of read-only memory (ROM) and some telephone interface circuitry all fits onto two boards that take up only a single expansion slot. The system will recognize up to 32 words, as spoken by a single operator, once it is "trained" by that operator. (This information is stored on a disk, so a second person could use another disk, or the operator could use several disks with different 32-word vocabularies.) These words can be integrated with any application so that the user could, for example, command Multiplan to "recalculate!"

Then there's the natural language interface, also scheduled to be available in the third quarter. This consists of a menu of sentence fragments designed to make the user think he's constructing a sentence that the computer can understand. In fact, the user is selecting a series of commands and options and filling in an occasional blank with a value. The system works on the same principle as a foreigner walking into a French restaurant and pointing to the appropriate phrases in his guidebook. He can ask any question he wants — as long as it's one preconceived by the system. Currently the system uses cursors and keys, but the system is clearly well-designed to work with a mouse.□

Dyson is president of Rosen Research, Inc. and editor of "Release 1.0", formerly "The Rosen Electronics Letter".

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There are an estimated 6,000 vendors in the software market. The *Computerworld Buyer's Guide to Software* will provide buyers with much needed help in sorting through the diverse packaged software offerings. And, it will offer advertisers a powerful vehicle for telling their story to *Computerworld* subscribers at that crucial moment when they are actively seeking software and vendors.

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Technology Architecture

ILLUSTRATION BY ROGER LEVOMARK

Keeping the Future In Perspective

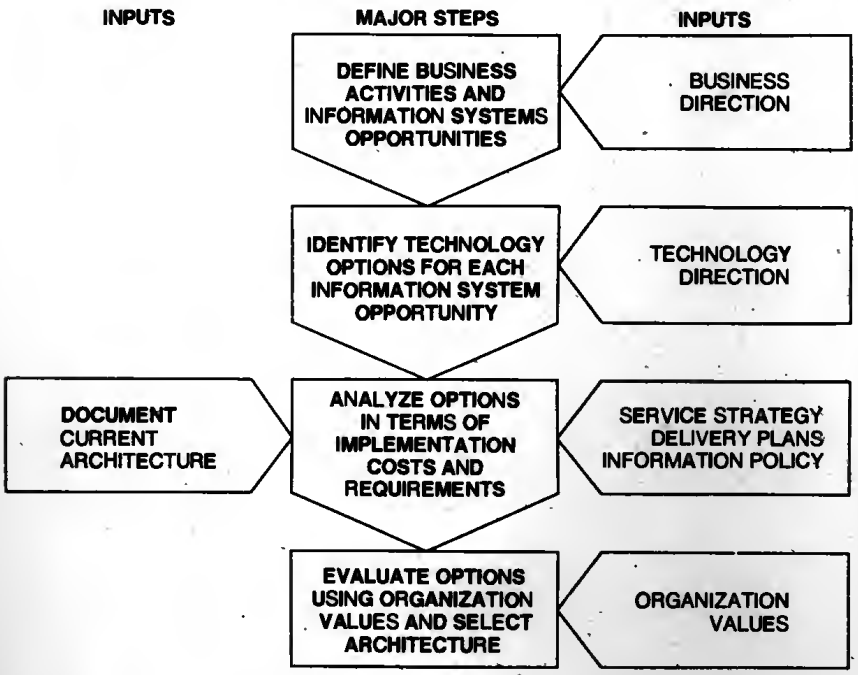
By G. Michael Ashmore

What is clearly needed in today's high-pressure information systems environment is a framework for providing the selection and implementation of information systems resources — hardware, software and personnel — effectively and efficiently, while still allowing for future business requirements and advances in technology.

Such a framework, often referred to as an information systems architecture, is designed to reflect the values of an organization with regard to operational efficiency (such as cost, management complexity, use of operation and so on). In addition, the information systems architecture provides for changes in installed technologies and the introduction of new technologies where they can support the thrust of the business.

Understanding the need for an information system architecture is one thing; developing one is quite a different matter. Most of the methods of producing such an architecture are complex and require a significant investment. The complexity is not due to the technical principles that are employed, such as understanding how information is used, but in the depth of the information that has to be gathered. For example, gathering data

INFORMATION SYSTEMS ARCHITECTURE METHODOLOGY



METHODOLOGY INPUTS

BUSINESS DIRECTION	Description of the business, its functions, activities and anticipated changes. Identifies areas in which information systems are required or highly useful.
TECHNOLOGY DIRECTION	Technical resources capabilities, trends and likely innovations.
CURRENT ARCHITECTURE	Existing resources and the services they provide.
SERVICE STRATEGY	Information services to be supported, user base and service objectives.
DELIVERY PLANS	Application and general service design details and implementation plans.
INFORMATION POLICY	Data Bases and high level data flow. Information usage and control policies.
ORGANIZATIONAL VALUES	Values with which the organization makes decisions and determines success.

Chart Courtesy of Index Systems, Inc.

on transaction volume may be irrelevant to a centralization/decentralization issue if control or response time requirements are sufficiently stringent.

In recognition of this problem, Index Systems, Inc., has formulated an updated approach to the information system architecture. This approach focuses on evaluating the functions performed by the business and the values which the organization uses to judge the performance of its operation. As a result, the methodology distinguishes itself in three critical ways from previous approaches. First, business direction is used to determine information system opportunities. This insures that the resulting information systems architecture is in alignment with the direction of the business. Second, technical capabilities are analyzed in terms of business impact, but only as they relate to the defined business direction. For example, if an opportunity for introducing word processing capabilities is identified, technical specifications for the equipment are examined and translated into pertinent business considerations, such as functional impact, quality and cost.

The third and perhaps most important approach involves applying the values of the organization to the tasks of defining the architecture, which reduces the amount of information that must be considered and therefore streamlines the entire process. This process results in the identification of those critical components (such as cost, control or risk) which drive technical resource decisions. In most organizations, the number of such components is small, necessitating little, if any, information gathering. As a result, the information system architecture can be developed quickly and efficiently.

Methodology

An information systems architecture methodology consists of three components:

- Descriptions of the steps to be performed.
- Guidelines and instructions for performing each step.
- A definition of the resulting work product.

The first and third components are based upon technical principle and logic that has already proven effective in other information system architecture methods. Consequently, this method does not differ significantly from previous approaches in either of these areas. Where the methodology introduces a new twist is in the second component; that is, in the way in which essential steps are performed. By identifying the values of the organization as they relate to the introduction and use of information systems as well as by using these values to analyze hardware, software and personnel options, the methodology requires detailed information only when it relates directly to the decision-making process. As a result, the amount of detail necessary for constructing the information system architecture is simplified and shortened.

As illustrated in the chart on page 58, the information systems architecture methodology requires that the following steps be conducted.

Prepare a high-level description of business activities and functional requirements for the planning time frame. Define information systems opportunities that support these requirements and potential improvements in efficiency or effectiveness of the organization.

For each information systems opportunity, determine the hardware, software and personnel options. As appropriate, include options based on anticipated new technologies and improvements in existing technologies.

Document the existing information systems, focusing on the capabilities and services that are or can be provided.

Analyze each technical resource option in terms of what it takes to get there — the cost, time, risk and level of effort involved — and what it means to be there (control, productivity, responsiveness).

Using these values of the organization, evaluate the options and select the option which best fits the organization. This option becomes the new information systems architecture and is the target for subsequent technical resource decisions.

The performance of each step in the order specified guarantees that the framework is aligned with business direction, takes into account technological advances and is consistent with the values and objectives of the organization.

The third and perhaps most important approach involves applying the values of the organization to the tasks of defining the architecture, which reduces the amount of information that must be considered and therefore streamlines the entire process.

The core of the updated information system architecture methodology is its recognition and use of the values of the organization. These values provide implicit direction for identifying information systems opportunities and explicit means for evaluating support options. They highlight both the critical decision factors and the information required to make those decisions. At the same time they eliminate the need to collect and consider information not immediately required for the decisions at hand.

How does this work? The initial step in the technique is tied intrinsically to the business: what activities occur, how is each performed, and how effectiveness and efficiency are measured. If all of these elements are known, technology options can be examined accordingly, in terms of the functional support and business factors that are important to the activities. A technology option is considered if

and only if it works and if it improves the effectiveness and efficiency of the function in those areas of the business that are highly valued.

In practice, this reduces the numbers of technologies that must be considered and can, in fact, specify particular resources. For example, an information systems opportunity for remote on line data entry that requires local edit capability and rapid response to achieve productivity benefits may necessitate intelligent terminals. If data manipulation requirements are added, with the same response time needs, microprocessors may be warranted. Cost, risk, available software and similar factors can further limit the options by restricting the choices of acceptable vendors or devices.

The process of choosing between options is similarly influenced by applying the values of the organization. Detailed information is required only in those instances in which it is critical to the evaluation. For example, if cost is the driving force, documentation of transaction volumes may be necessary to select between a distributed solution and a centralized processing option that includes remote terminals. This same data may not be necessary if the need for strong, local control dictates a distributed data processing strategy.

Looking across all technology options, the values of the organization usually require selected detail from the following areas:

- Service strategy.
- Delivery plans (including applications plans).
- Information policy.

Each of these areas is described briefly in the chart on page 58. It is important to recognize, however, that the complete collection of information is seldom, if ever, required for the process and that the information that is required is often already known within the organization.

In summary, the technique preserves principles established by other methodologies, while reducing the amount of information that must be considered.

An information systems architecture is a framework for deploying technical resources (meaning hardware, software, and information systems support personnel) to meet current and anticipated future business needs. The architecture addresses the following questions explicitly:

- Which technologies are right for the business?
- Which information systems resources best provide the required services?
- How should those resources be deployed (where are the resources located, when are they installed, how are they connected and who manages them) to deliver needed capabilities?

The architecture takes the form of a description of the services to be provided, the technical resources to be installed at each business site and the connectivity between sites. The architecture also includes standards and guidelines which govern the implementation of additional or replacement resources.□

Ashmore is a principal at Index Systems, Inc., a consulting firm located in Cambridge, Mass.

Magazine

AUGUST 1954

VENDOR PROFILES
WITH PRODUCT INDEX

ACCELERATED DATA SYSTEMS
1183 Bordeaux
Sunnyvale CA 94086
(408) 744-0264
Major Markets: OEM Computer Systems Computer Manufacturing Systems House (OEM)
Target Industries: Scientific Engineering
Target Applications: CAD/CAM
Geographic Coverage: International
Year Established: 1980

ACCESS MATRIX CORP.
2159 Bering Drive
San Jose CA 95131
(408) 263-3660
Major Market: Computer Manufacturing
Contacts
Head of Marketing/Sales H White
Head of Customer Service Donna Walker
Geographic Coverage: International
Year Established: 1981
Number of Employees: 100

ACTION COMPUTER ENTERPRISE
55 W Del Mar Blvd
Pasadena CA 91105
(213) 793 2440
Major Market: Computer Manufacturing
Net Sales: $1 Million — $5 Million (1981)
Contacts
Head of Software Herb Siegel
Head of Engineering Kwok Ong
Geographic Coverage: International
Year Established: 1979
Number of Employees: 40

ACTION INSTRUMENTS CO., INC.
8601 Aero Drive
San Diego CA 92123
(619) 279 5726
Major Markets: Computer Manufacturing Software House Maintenance/Other Services
Target Industries: Manufacturing
Net Sales: $5 Million — $25 Million (1981)
Contacts
Head of Marketing/Sales Chuck Philyaw
Head of Software Harry Skawinski
Head of Customer Service Doug Harvey
Geographic Coverage: International
Year Established: 1970
Number of Employees: 200

ACTU SYSTEMS
1160 Mark Ave
Carpinteria CA 93013
(805) 684-4622
Major Markets: Computer and Peripheral Manufacturing
Target Industries: Retailing
Contacts:
Head of Marketing Jerry Davies
Geographic Coverage: International
Year Established: 1979
Number of Employees: 40

ACUREX CORP.
Autodata Division
485 Clyde Ave
Mountain View CA 94042
(415) 964-3200
Major Markets: OEM Computer Systems Systems House (OEM), Computer Manufacturing
Target Industries: Utilities
Net Sales: $5 Million — $25 Million (1982)
Contacts
Head of Marketing Sales Donald Willett
Head of Software Ron Eichron
Head of Customer Service Rick Perry
Geographic Coverage: International
Year Established: 1970
Number of Employees: 600

ADAC CORP.
70 Tower Office Park
Woburn MA 01801
(617) 935-6668
Major Markets: Computer and Peripheral Manufacturing OEM Computer Systems
Target Industries: Manufacturing
Target Applications: Data Acquisition
Net Sales: $5 Million — $25 Million (1981)
Contacts
Head of Marketing Allen Pollens
Geographic Coverage: International

ADVANCED DIGITAL PRODUCTS, INC.
1250 Union St
San Diego CA 92101
(714) 533-0103
Major Markets: Computer Manufacturing Software House
Target Industries: Business Educational Scientific
Contacts
Head of Marketing/Sales D A George
Head of Software Barry Demchak
Geographic Coverage: International
Year Established: 1981
Number of Employees: 30

ADVANCED INFORMATICS, LTD.
7th & Elm
West Liberty IA 52776
(319) 627-4211
Major Markets: Computer and Peripheral Manufacturing Software House OEM Peripherals/Terminals
Target Industries: Small Business Government
Net Sales: $1 Million — $5 Million (1982)
Contacts
Head of Engineering Thomas Miller
Geographic Coverage: National
Year Established: 1978
Number of Employees: 57

ADVANCED MICRO DEVICES, INC.
Micro Computer Systems Directorant
3340 Scott Blvd
Santa Clara CA 95051
(408) 988-7777
Major Markets: OEM Computer Systems Computer Manufacturing
Target Industries: Telecommunications Communications Industrial Military
Target Applications: Industrial Control
Net Sales: $5 Million — $25 Million (1982)
Geographic Coverage: International
Year Established: 1979
Number of Employees: 100

ADVANCSD MICRO DIGITAL CORP.
7201 Garden Grove Blvd
Garden Grove CA 92644
(714) 891-4004
Major Market: Computer Manufacturing
Target Industries: OEM
Target Applications: General Business
Net Sales: $1 Million — $5 Million (1982)
Contacts
Head of Sales Al Baghen
Head of Engineering Alonzo Cardenan
Geographic Coverage: International
Year Established: 1980
Number of Employees: 75

AKI, INC.
1117 N 19th St
Arlington VA 22180
(703) 522-5876
Major Markets: Computer Manufacturing OEM Computer Systems
Target Industries: Publishing Printing
Contacts:
Head of Sales Donna Wiley
Geographic Coverage: Regional
Year Established: 1960
Number of Employees: 15

ALBERT COMPUTER, INC.
3170 Los Feliz Drive
Unit C
Thousand Oaks CA 81362
(805) 497-1073
Major Market: Computer Manufacturing
Contacts:
Head of Marketing Kenneth Siger
Head of Sales Ted Philips
Geographic Coverage: International
Year Established: 1982
Number of Employees: 45

ALCYON, INC.
8716 Production Ave
San Diego CA 92121
(714) 578-0660
Major Markets: Computer Manufacturing OEM Peripherals/Terminals Software House
Target Applications: General Business Software Development
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing Lowell C Chase Sr
Head of Software William Allen
Geographic Coverage: International
Year Established: 1979
Number of Employees: 10

ALPHA MICROSYSTEMS, INC.
17881 Skypark N
Irvine CA 92713
(714) 957-1404
Major Market: Computer Manufacturing
Net Sales: $25 Million — $100 Million (1982)
Contacts
Head of Marketing Richard Olive
Head of Sales Barry Dearborn
Head of Engineering John Glade
Geographic Coverage: International
Year Established: 1977
Number of Employees: 280

ALSPA COMPUTER, INC.
300 Harvey W Blvd
Santa Cruz CA 95060
(408) 429-6000
Major Market: Computer Manufacturing
Target Industries: System Integrators OEM
Contacts
Head of Sales Richard Brooks
Head of Engineering Steven Rupp
Head of Customer Service Dennis Henning
Geographic Coverage: International
Year Established: 1980

ALTOS COMPUTER SYSTEMS, INC.
2641 Orchard Park Way
San Jose CA 95134
(408) 946-6700
Major Market: Computer Manufacturing
Target Industries: OEM
Target Applications: General Business
Net Sales: $25 Million — $100 Million (1981)
Contacts
Head of Marketing Mike Skelton
Geographic Coverage: International
Year Established: 1977
Number of Employees: 375

AMDAHL CORP.
1250 E Arques Ave
P O Box 470
Sunnyvale CA 94086
(408) 746-7118
Major Markets: Component Computer Peripheral and Communications Equipment Manufacturing OEM Computer Systems Software House Dealer/Distributor Maintenance/Other Services
Target Applications: Project Productivity
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing William F O Connell
Head of Software Fredrick M Trapnell Jr
Head of Engineering Bruce Beebe
Geographic Coverage: International
Year Established: 1970
Number of Employees: 5,300

AMF LOGIC SCIENCES, INC.
Suite 103
10535 Rockley Road
Houston TX 77099
(713) 879-0536
Major Markets: Computer Manufacturing OEM Computer Systems
Target Industries: Oil Exploration
Target Applications: Displays
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Marketing/Sales Roger Fuller
Head of Software/Engineering John Barugh
Head of Customer Service Jim Nipper
Geographic Coverage: International
Year Established: 1973
Number of Employees: 35

AM INTERNATIONAL, INC.
Varityper Division

Vendors

11 Mount Pleasant Ave
East Hanover NJ 07936
(201) 887 8000
Major Markets OEM
Peripherals Terminals and Computer Systems Miscellaneous Computer Supplies Computer Manufacturing
Target Industries Printing
Target Applications. Typesetting Telecommunications
Contacts.
Head of Marketing Richard M Flanagan
Head of Sales O R Hughes
Head of Software Don Campbell
Head of Engineering George Pick
Geographic Coverage International
Year Established 1881
Number of Employees 2 500

AMNET, INC.
101 Morse St
Watertown MA 02172
(617) 923-1850
Major Markets Computer and Communications Equipment Manufacturing OEM Computer Systems Software House
Target Industries Banking Government Manufacturing Airlines
Target Applications: Pay-by-Phone Account Balance Information Payroll
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing John Whelan
Geographic Coverage: International
Year Established 1968
Number of Employees. 75

AMTEL SYSTEMS CORP.
1293 Anvilwood Ave
Sunnyvale CA 94086
(408) 734-5092
Major Markets: Computer and Communications Equipment Manufacturing Systems House (OEM)
Target Industries: Fortune 500 Banking Finance
Target Applications: Automated Message Counting Text Delivery TWX Telex
Net Sales: $1 Million — $5 Million (1981)
Contacts.
Head of Marketing Donald F McCook
Head of Software Gary Wiedenman
Head of Engineering Ernest L Long
Head of Customer Service David Brown
Geographic Coverage: National
Year Established: 1978
Number of Employees: 30

ANALOG DEVICES
3 Technology Way
Rt 1 Industrial Park
P O Box 280
Norwood MA 02062
(617) 329-4700
Major Markets: OEM Computer Systems Computer Manufacturing
Target Industries: Manufacturing Laboratories
Target Applications: Laboratory R&D Measurement and Control Product Testing
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing Bill Miller
Geographic Coverage: International
Year Established: 1965
Number of Employees 2 800

ANDROMEDA SYSTEMS, INC.
9000 Eton Ave
Canoga Park CA 91304
(213) 709-7600
Major Markets. Component Computer and Terminal Manufacturing Software House Systems House (OEM)
Target Industries Scientific
Net Sales $1 Million — $5 Million (1981)
Contacts
Head of Marketing Les Lazar
Geographic Coverage International
Year Established 1977
Number of Employees 25

ANDROTEK/DMI
5589 Westerville Road
Westerville OH 43081
(614) 882 7821
Major Markets OEM Computer Systems Software House Computer Manufacturing
Target Industries Manufacturing
Net Sales $100 000 — $500 000 (1981)
Geographic Coverage: International
Year Established 1973
Number of Employees. 15

APF ELECTRONICE, INC.
1501 Broadway
New York NY 10036
(212) 869 1960
Major Markets Office Equipment and Computer Manufacturing
Target Industries Mass Merchandising
Contacts
Head of Marketing Neil Lipper
Geographic Coverage National
Year Established. 1968
Number of Employees 35

APOLLO COMPUTER, INC.
15 Elizabeth Drive
Chelmsford MA 01824
(617) 256-6600
Major Markets Component and Computer Manufacturing OEM Computer Systems Maintenance/Other Services
Target Applications CAD/CAM-
Net Sales $5 Million — $25 Million (1982)
Contacts
Head of Marketing Barry Fidelman
Geographic Coverage International
Year Established 1980
Number of Employees: 500

APPLE COMPUTER, INC.
20525 Mariani Ave
Cupertino CA 95014
(408) 996-1010
Major Markets: Computer Terminal and Peripheral Manufacturing OEM Computer Systems
Target Industries: General Business
Target Applications General Business Personal Entertainment
Net Sales: More than $100 Million (1982)
Contacts.
Head of Sales Gene Carter
Geographic Coverage: International
Year Established: 1978
Number of Employees: 3,500

APPLIED DIGITAL DATA EYSTEMS, INC.
100 Marcus Blvd
Hauppauge NY 11787
(516) 231 5400
Major Markets Computer and Terminal Manufacturing
Contacts
Head of Marketing E Sheffer
Head of Engineering William J Catacosinos
Head of Customer Service John Witherow
Year Established: 1969
Number of Employees. 900

APPLIED DYNAMICS INTERNATIONAL
3800 Stone School Road
Ann Arbor MI 48104
(313) 973-1300
Major Markets: Component and Computer Manufacturing
Target Industries. Aerospace Energy Automotive
Target Applications Simulation Systems Transmission Design
Net Sales: $5 Million — $25 Million (1981)
Contacts
Head of Marketing Edward Fadden
Head of Customer Service Donald Chandler
Geographic Coverage: International
Year Established: 1955
Number of Employees. 83

APPLIED EYETEME CORP.
26401 Harper
St Clair Shores MI 48081
(313) 779-8700
Major Markets: Component and Computer Manufacturing, OEM Computer Systems
Geographic Coverage: Regional
Year Established: 1965
Number of Employees: 15

APPLIED TECHNOLOGY VENTURES, INC. (ATVINC)
2921 S Daimler St
Santa Anna CA 92705
(714) 546-3551
Major Markets: Computer Manufacturing Systems House (OEM)
Terget Industries: Hospitality Office Information
Contacts:
Head of Customer Service Phil Gomez
Geographic Coverage: International
Year Established: 1979
Number of Employees: 650

ARC AUTOMATION EERVICE, INC.
219 Penmeter Center Pkwy
Atlanta GA 30346
(404) 393-0750
Mojor Markets: Computer Manufacturing, Systems House (OEM), OEM Computer Systems
Target Industries: Insurance
Net Sales. $25 Million — $100 Million (1981)
Contacts:
Head of Marketing Chris Scatliff
Head of Sales Roy Hill
Head of Engineering Wallis McMeth
Head of Customer Service William Walsh
Geographic Coverage: International
Year Established: 1963
Number of Employees: 900

ARCHIVES, INC.
404 W 35th St
Davenport IA 52806
(319) 386-7400
Major Markets. Computer Manufacturing OEM Computer Systems Systems House (OEM)
Target Industries: Legal Associations
Target Applications Legal Time/Billing Telex Membership/Fund Art
Contacts:
Head of Sales Bob Hill
Head of Software Mark Komatar
Head of Engineering John Jebens
Head of Customer Service Paul Keller
Geographic Coverage International
Year Established: 1978
Number of Employees: 50

ARDENT COMPUTER PRODUCTS, INC.
145 Palsades St
Dobbs Ferry NY 10522
(914) 693-6900
Major Markets: Component and Computer Manufacturing Miscellaneous Computer Supplies
Target Industries: OEM
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing Gilbert Herm.
Geographic Coverage National
Year Established: 1980
Number of Employees 50

AETRDNAUTICE CORP. OF AMERICA
907 S 1st St
Milwaukee WI 53204
(414) 671-5500
Major Markets: Component Computer Terminal and Peripheral Manufacturing
Target Industries. Aerospace Military
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing R D Seinfeld
Geographic Coverage. International
Year Established: 1959
Number of Employees: 1,300

AUGUET EYSTEME, INC.
2757 19th St S E
Salem, OR 97302
(503) 364-5863
Major Markets: Computer Manufacturing, Systems House (OEM)
Target Industries: Pharmaceutical Metallurgical
Net Sales: $100 000 — $500 000 (1981)
Contacts:
Head of Marketing/Sales Dick Wolfe
Head of Engineering Tony Fredenckson
Geographic Coverage: International
Year Established: 1978
Number of Employees: 50

AURAGEN SYSTEMS CORP.
2 Executive Drive
Fort Lee, NJ 07024
(201) 461-3400
Major Market: Computer Manufacturing
Contacts:
Head of Marketing Tom Garvey
Year Established: 1981
Number of Employees: 100

AUTECN CORP.
1301 W Copans Road
Pompano Beach FL 33064
(305) 979 2700
Major Markets: Computer Terminal and Peripheral Manufacturing Maintenance/Other Services
Net Sales: $1 Million — $5 Million (1981)
Contacts.
Head of Marketing Marvin L Bunn
Head of Sales Richard H Caro
Geographic Coverage: International
Year Established: 1968
Number of Employees: 75

AUTOMATIC CONTROL ELECTRONICS
P O Box 20264
San Antonio TX 78220
(512) 661-4111
Major Markets: Component and Computer Manufacturing OEM Computer Systems Software House
Target Industries: Concrete Grain
Target Applications: Automatic Batching
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing D E J FitzSimon
Head of Engineering Gordon Alley
Geographic Coverage: National
Year Established: 1961
Number of Employees: 55

AUTOMATIC TERMINAL INFORMATION SYSTEMS, INC.
2140 Wirtcrest
Houston TX 77055
(713) 688-4256
Major Markets: Component Computer and Peripheral Manufacturing Systems House (OEM) Maintenance/Other Services Software House
Target Industries: Oil, Banking, Grain Manufacturing
Target Applications: Industrial Control
Net Sales: $500 000 — $1 Million (1982)
Contacts:
Head of Sales Robert Spaw
Head of Software/Engineering Lewis Bodden
Geographic Coverage: International
Year Established: 1973
Number of Employees: 9

AYDIN CORP.
Controls Division
401 Commerce Drive
Fort Washington PA 19034
(215) 542-7800
Major Markets: Computer Component, Terminal and Communications Equipment Manufacturing, Software House Miscellaneous Computer Supplies
Contacts:
Head of Marketing Joseph Teylor
Head of Software Charles Wise
Geographic Coverage: International
Year Established: 1967
Number of Employees: 390

AZURDATA, INC.
4102 148th Ave N E
Redmond WA 98052
(509) 881-5100
Major Markets: Software House Computer and Terminal Manufacturing
Target Industries: Food: Drug
Target Applications: Order Entry, Energy Management
Net Sales: $5 Million — $25 Million (1981)
Contacts.
Head of Marketing Ray Dawson
Geographic Coverage: National
Yaer Established: 1972
Number of Employees: 160

BARRETO A ASSOCIATEB, INC.
1709 Broadway
Sedalia MO 65301
(816) 826-0689
Major Market: Computer Manufacturing
Target Industries: Hotel/Motel
Contacts.
Head of Marketing Greg Corpier
Geographic Coverage: National
Yaar Established: 1981
Number of Employees: 5

BARRINGTON INTERNATIONAL CORP.
Suite 4
738 Airport Blvd
Ann Arbor MI 48104
(313) 769-7611
Major Market: Computer Manufacturing
Target Industries. OEM Dealer
Contacts
Head of Sales Mika Hamman
Geographic Coverage: International
Year Established: 1986
Number of Employees 15

BBN COMPUTER CORP.
10 Moulton
Cambridge MA 02238
(617) 491-1850
Major Markets: Computer and Terminal Manufacturing
Target Industries: Defense Government Federal Agencies Large Corporations
Target Applications: Office Automation Data Control
Contacts:
Head of Marketing Charles Stein
Head of Sales Terry Fagin
Geographic Coverage: International
Year Established: 1978
Number of Employees. 300

BILLINGS COMPUTER CORP.
18600 E 37th Terrace
Independence MO 64057
(816) 373-0000
Major Markets: Computer Manufacturing, OEM Peripherals/Terminals, Software House Systems House (OEM) Maintenance/Other Services
Target Applications: Electronic Mail
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing Peter Berg
Head of Software Stephen Hatch
Head of Engineering Robert J Ridge
Head of Customer Service Jan Gillison
Geographic Coverage: International
Year Established: 1978

BRAEGEN CORP.
20740 Valley Green Drive
Cupertino CA 95014
(408) 255-4200
Major Markets: Computer, Terminal and Peripheral Manufacturing, OEM Computer Systems
Contacts:
Head of Marketing John Corey
Head of Sales Robert Beaver
Head of Engineering Ken McCoy
Geographic Coverage: International
Year Established: 1973
Number of Employees: 500

BTI COMPUTER BYSTEMS, INC.
870 West Maude Ave
Sunnyvale, CA 94086
(408) 733-1122
Major Market: Computer Manufacturing
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing John Nickerson
Geographic Coverage: International
Year Established: 1968
Number of Employees: 350

BUCK ENGINEERING, INC.
Lab Volt Systems Division
Rt 34
P O Box 686
Farmingdale NJ 07727
(201) 661-6200
Major Market: Computer Manufacturing
Target Industries: Education
Target Applications: Training
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing A G Anderson
Geographic Coverage: International
Year Established: 1934
Number of Employees: 175

BUDGET COMPUTER SYSTEMS, INC.
505 N Rockwell
Oklahoma City OK 73127
(405) 495-7300
Major Markets: Computer Manufacturing OEM Computer Systems, Software House, Systems House (OEM)
Target Industries: Accounting Dental
Geographic Coverage: National
Year Established: 1977
Number of Employees: 10

BUNKER RAMO INFORMATION SYSTEMS
31717 La Tienda Drive
P O Box 5099
Westlake Village, CA 91359
(213) 889-2211
Major Markets: Peripheral and Computer Manufacturing, Software House OEM Computer Systems
Target Industries: Department of Defense
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing H A Lindsay
Head of Software P H Chang
Head of Engineering Dr A D Scarborough
Geographic Coverage: National
Year Established: 1964
Number of Employees: 514

BURR BROWN RESEARCH CORP.
Industrial Systems Division
3631 E 44th St
Tuscon, AZ 85713
(602) 747-0711
Major Markets: Component, Computer Terminal and Peripheral Manufacturing OEM Computer Systems
Target Industries: Manufacturing, Energy
Target Applications: Process Control Factory Data Collection
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing Richard Frehwell
Geographic Coverage: International
Year Established: 1976
Number of Employees: 200

BURROUGHS CORP.
Diversified Products Group
Burroughs Place
Detroit MI 48232
(313) 972-7000
Major Markets: Computer Terminal Peripheral Communications Equipment and Office Equipment Manufacturing OEM Computer Systems, Software House Dealer/Distributor, Maintenance/Other Services Miscellaneous Computer Supplies
Target Industries: Government, OA, Office Supply
Net Sales. More than $100 Million (1981)
Geographic Coverage: National
Year Established. 1885

BYTRONIX CORP.
2701 E Chapman Ave
Fullerton, CA 92631
(714) 871-8763
Major Market: Computer Manufacturing
Target Industries: OEM
Contacts:
Head of Engineering Keith Wakeling
Geographic Coverage: International
Year Established: 1978
Number of Employees: 21

CADLINC, INC.
1872 Brummel
Elk Grove Village, IL 60007
(312) 228-7300
Major Markets: Software House, Systems House (OEM), Computer Manufacturing
Target Industries: Manufacturing, Mechanical Design
Target Applications. Network Control
Contacts:
Head of Marketing William Schaefer
Head of Sales Don Swanson
Head of Software Michael Sterling
Geographic Coverage: National
Year Established: 1981
Number of Employees: 65

CADO SYSTEMS CORP.
2771 Toledo St
Torrance, CA 90503
(213) 323-8170
Major Markets: Computer Manufacturing, OEM Computer Systems, Systems House (OEM)
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing Aubrey Easterlin
Head of Sales Donald B Elliot
Head of Engineering Don Savitt
Head of Customer Service Len Jobaris
Geographic Coverage: International
Year Established: 1976
Number of Employees: 250

Vendors

CALIFORNIA COMPUTER SYSTEMS
250 Caribean Drive
Sunnyvale CA 94086
(408) 734-5811
Major Market: Computer Manufacturing
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Lauren Willey
Head of Sales: Peter Passaretti
Geographic Coverage: International
Year Established: 1979
Number of Employees: 75

CALLAN DATA SYSTEMS
2645 Townsgate Road
Westlake Village CA 91361
(805) 497-6837
Major Market: Computer Manufacturing
Target Industries: Medical Manufacturing, Communications, Military
Target Applications: Process Control
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Jim Alexander
Head of Software: Christina Cory
Head of Engineering: William Pohlman
Geographic Coverage: International
Year Established: 1980
Number of Employees: 45

CAMSEX CORP.
360 Second Ave
Waltham MA 02154
(617) 890-6000
Major Market: Computer and Peripheral Manufacturing
Contacts:
Head of Marketing: Jean P. Larkin
Geographic Coverage: International
Year Established: 1968
Number of Employees: 120

CANON U.S.A., INC.
One Canon Plaza
Lake Success NY 11042
(518) 488-6700
Major Markets: Computer Peripheral and Office Equipment Manufacturing, Systems House (OEM), OEM Computer Systems
Net Sales: More than $100 Million (1981)
Geographic Coverage: International
Year Established: 1966
Number of Employees: 2,500

CARDKEY SYSTEMS
20339 Nordhoff St
Chatsworth CA 91311
(213) 998-7560
Major Markets: OEM Computer Systems, Maintenance/Other Services, Computer Manufacturing
Target Applications: Access Control, Security Management
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Marketing: Ralph Armstrong
Geographic Coverage: International
Year Established: 1940
Number of Employees: 250

CASIO, INC.
15 Gardner Road
Fairfield NJ 07006
(201) 575-9400
Major Markets: Dealer/Distributor, Computer Manufacturing
Contacts:
Head of Engineering: Donny Coffett
Geographic Coverage: International
Year Established: 1970
Number of Employees: 4,000

CENTRAL DATA CORP.
1602 Newton Drive
Champaign IL 61820
(217) 359-8010
Major Markets: Component Computer and Peripheral Manufacturing, Dealer/Distributor, OEM Peripherals/Terminals
Target Applications: General Business, Accounting, Testing Devices
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Earl D. Jacobsen
Head of Sales: Norman MacGregor
Head of Software: Charles Weaver
Head of Engineering: Jeffrey Roloff
Geographic Coverage: International
Year Established: 1975
Number of Employees: 40

CENTURION COMPUTER CORP.
1780 Jayell
Richardson TX 75080
(214) 934-5700
Major Market: Computer Manufacturing
Target Industries: Accounting, General Business, Insurance, Customer Service
Target Applications: General Accounting
Contacts:
Head of Engineering: Thomas Atwood
Geographic Coverage: International
Year Established: 1974
Number of Employees: 100

CENTURY COMPUTER CORP.
14453 Gillis
Dallas TX 75234
(214) 233-3238
Major Market: Computer Manufacturing
Target Industries: Government, Automation, Nonprofit, Credit Unions
Target Applications: Accounting
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Sales: Ray Kramer
Head of Engineering: Hans Knel
Geographic Coverage: International
Year Established: 1975
Number of Employees: 30

CHALLENGE SYSTEMS, INC.
1225 Commerce
Richardson, TX 75081
(214) 669-1101
Major Markets: OEM Computer Systems, Systems House (OEM), Computer Manufacturing
Geographic Coverage: International
Year Established: 1982

CHARLES RIVER DATA SYSTEMS, INC.
4 Tech Circle
Natick MA 01760
(617) 655-1800
Major Markets: OEM Computer Systems, Software House, Computer Manufacturing
Target Industries: OEM, Education, Communications, Commercial Data
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Dan DeLea
Head of Sales: Bill Nineer
Head of Software: Jeff Goldberg
Head of Engineering: Russell O'Connor
Geographic Coverage: International
Year Established: 1973
Number of Employees: 80

CHOICE RETAIL SYSTEMS, INC.
1345 Terrell Mill Road
Marietta GA 30067
(404) 952-1358
Major Markets: Computer and Terminal Manufacturing, OEM Computer Systems, Software House
Target Industries: Retail, Wholesale Distribution
Target Applications: POS Polling, General Business
Contacts:
Head of Marketing/Sales: Mercer West
Geographic Coverage: International
Year Established: 1980
Number of Employees: 25

CHROMATICS, INC.
2558 Mountain Industrial Blvd
Tucker GA 30084
(404) 493-7000
Major Market: Computer Manufacturing
Target Industries: Manufacturing, Engineering
Target Applications: Graphics, Process Control, CAD/CAM
Contacts:
Head of Marketing: M.L. Durham
Head of Sales: Don McKinney
Geographic Coverage: International
Year Established: 1976

CIE SYSTEMS, INC.
2515 McCabe Way
P.O. Box 16579
Irvine CA 92713
(714) 957-1112
Major Market: Computer Manufacturing
Target Industries: OEM
Target Applications: General Business
Contacts:
Head of Marketing: Warren Blossom
Geographic Coverage: National
Year Established: 1981
Number of Employees: 60

CMC INTERNATIONAL
Suite 220
11058 Main St
Bellevue WA 98004
(206) 453-9777
Major Markets: Computer Manufacturing, Dealer/Distributor
Target Industries: Dealers
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Rick Helberg
Geographic Coverage: International
Year Established: 1975
Number of Employees: 19

CODATA SYSTEMS CORP.
285 N. Wolfe Road
Sunnyvale, CA 94086
(408) 735-1744
Major Markets: Computer Manufacturing, Software House, OEM Peripherals/Terminals
Target Industries: Engineering
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Beau Vrolyk
Head of Engineering: Bob Davis
Geographic Coverage: International
Year Established: 1979
Number of Employees: 55

CODEX CORP.
20 Cabot Blvd
Mansfield MA 02048
(617) 364-2000
Major Markets: Terminal, Peripheral and Computer Manufacturing
Target Applications: Data Communications, DP
Contacts:
Head of Marketing: John Pugh
Geographic Coverage: International
Year Established: 1962
Number of Employees: 2,500

COGENT DATA TECHNOLOGIES

175 West St
P.O. Box 926
Friday Harbor WA 96250
(206) 378-2929
Major Markets: Peripheral Manufacturing, OEM Peripherals/Terminals, Software House
Target Applications: Data Base Management
Target Industries: Business (Corporate)
Contacts:
Head of Marketing: Deanna Anderson
Head of Sales: Kris Mikami
Head of Software: George Porter
Head of Customer Service: Sally Evans
Geographic Coverage:
Year Established: 1982
Number of Employees: 15

COLONIAL DATA SERVICES CORP.
105 Sanford St
Hamden CT 06514
(203) 288-2524
Major Market: Computer Manufacturing
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Ron Labarbera
Geographic Coverage: International
Year Established: 1980
Number of Employees: 15

COLUMBIA DATA PRODUCTS, INC.
9180D Rumsey Road
Columbia MD 21045
(301) 992-3400
Major Markets: Computer and Peripheral Manufacturing
Target Industries: Manufacturing, Engineering, Professional
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: John A. White
Head of Sales: Michael Heilman
Head of Engineering: Richard Mathews
Geographic Coverage: International
Year Established: 1978

Number of Employees: 150

Additional information provided for by supplier

Call Hall-Mark for Columbia Data your computer systems and peripherals source for the 80's

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WEST	
Denver	(303) 694-1662
Phoenix	(602) 243-6601
San Diego	(619) 268-1201
Sunnyvale	(408) 773-9990

COMARR CORP.
93 West St
P O Box 474
Medfield MA 02052
(617) 359-8161
Major Markets: Component Peripheral and Computer Manufacturing OEM Computer Systems Dealer/Distributor Maintenance/Other Services
Target Applications: Process Control, Lab Functions Data Acquisition Accounting
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing Mike Glinski
Geographic Coverage: International
Year Established: 1975
Number of Employees: 50

COMMODORE BUSINESS MACHINES, INC.
487 Devon Park Drive
Wayne PA 19087
(215) 687-9750
Major Markets: Computer and Peripheral Manufacturing Software House Systems House (OEM)
Contacts:
Head of Software Paul Goheen
Geographic Coverage: International

COMMUNICATION MANUFACTURING CO.
3300 E Spring St
Long Beach CA 90801
(213) 426-8345
Major Market: Computer Manufacturing
Target Industries: Security Access Control
Target Applications: Facility Management
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing Jack Shelton
Head of Sales Jim St Pierre
Geographic Coverage: International
Year Established: 1962
Number of Employees: 250

COMPAL COMPUTER SYSTEMS, INC.
15617A Ventura Blvd
Encino CA 91436
(213) 907-8003
Major Markets: Computer and Terminal Manufacturing OEM Computer Systems Software House Systems House (OEM) Dealer/Distributor Maintenance/Other Services
Contacts:
Head of Marketing Ira Kalb
Geographic Coverage: California
Year Established: 1976
Number of Employees: 15

COMPAQ COMPUTER CORP.
12330 Perry Road
Houston TX 77070
(713) 890-6390
Major Market: Computer Manufacturing
Target Industries: Dealers
Contacts:
Head of Marketing Mike Swabely
Geographic Coverage: National
Year Established: 1982

COMPUCORP
2211 Michigan Ave
Santa Monica CA 90404
(213) 829-7453
Major Markets: Computer and Office Equipment Manufacturing Data Services
Target Industries: Legal Business
Target Applications: WP Accounting
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing S Cimbolost
Geographic Coverage: International
Year Established: 1968
Number of Employees: 500

COMPUGRAPHIC CORP.
200 Ballardvale St
Wilmington MA 01887
(617) 944-8555
Major Markets: OEM Computer Systems Computer Manufacturing
Target Industries: Publishing Newspaper, Commercial Printing Education Government
Net Sales: More than $100 Million (1982)
Contacts:
Head of Marketing Bryan E Newman
Head of Sales James Winters
Head of Software Edward Kiemm
Head of Engineering David Lundquist
Geographic Coverage: International
Year Established: 1961
Number of Employees: 4,300

COMPUMOTOR CORP.
1310 Ross St
Petaluma CA 94952
(707) 778-1244
Major Markets: Component Computer and Peripheral Manufacturing Miscellaneous Computer Supplies
Target Industries: Automation Robotics
Contacts:
Head of Sales Scott Johnson
Head of Engineering Cap Jacobs
Geographic Coverage: National
Year Established: 1978
Number of Employees: 60

COMPUPRO CORP.
Building 725
Oakland Airport CA 94614
(415) 562-0636
Major Markets: Computer and Peripheral Manufacturing OEM Peripherals/Terminals Maintenance/Other Services
Target Industries: General Business, Industrial, Scientific
Contacts:
Head of Sales Jim Lamphear
Geographic Coverage: International
Year Established: 1975
Number of Employees: 50

COMPUTER AUTOMATION, INC.
Naked Mini Division
2181 Dupont Drive
Irvine CA 92713
(714) 833-8830
Major Markets: Component Computer and Terminal Manufacturing OEM Computer Systems and Peripherals Terminals Maintenance/Other Services
Contacts:
Head of Marketing Nonn Breyga
Geographic Coverage: International
Year Established: 1967
Number of Employees: 300

COMPUTER AUTOMATION, INC.
Commercial Systems Division
2181 Dupont Drive
Irvine CA 92713
(714) 833-8830
Major Markets: Computer and Communications Equipment Manufacturing Maintenance/Other Services
Target Industries: Distribution
Contacts:
Head of Marketing Richard A Comstock
Geographic Coverage: International
Year Established: 1075
Number of Employees: 200

COMPUTER COMMUNICATIONS SPECIALISTS, INC.
6683 Jimmy Carter Blvd
Atlanta GA 30071
(404) 441-3114
Major Markets: Peripheral Component Computer and Communications Equipment Manufacturing OEM Computer Systems Software House Systems House (OEM) Dealer/Distributor, Maintenance/Other Services
Target Industries: Utilities Manufacturing Retail Wholesale
Target Applications: Data Entry POS Polling Badge Readers Bar-Code Readers
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing Steve A Aufderhar
Head of Software R L Pass
Head of Engineering Dr Dwight Jones
Geographic Coverage: International
Year Established: 1977
Number of Employees: 30

COMPUTER CONSOLES, INC.
97 Humbolt St
Rochester NY 14609
(716) 482-5000
Major Markets: OEM Computer Systems Computer Manufacturing
Target Industries: Telephone OA
Target Applications: WP Directory Assistance OA
Contacts:
Head of Marketing/Sales Gary Haynes
Head of Engineering William Deller
Geographic Coverage: National
Year Established: 1968

COMPUTER DESIGNED SYSTEMS, INC.
Commercial Systems Division
10911 Olson Memorial Highway
Minneapolis MN 55441
(612) 545-2855
Major Markets: Component Computer Terminal and Peripheral Manufacturing OEM Computer Systems Systems House (OEM)
Target Industries: Manufacturing, Distribution Medical
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Engineering Thanasic Spropoulos
Geographic Coverage: National
Year Established: 1968
Number of Employees: 45

COMPUTER DEVICES, INC.
25 North Ave
Burlington MA 01803
(617) 273-1550
Major Markets: Computer and Terminal Manufacturing
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing/Sales Robert Joseph
Head of Engineering Gerry Galicki
Geographic Coverage: International
Year Established: 1968
Number of Employees: 350

COMPUTER HARDWARE, INC.
43500 Pell Drive
P O Box 2550000
Sacramento CA 95838
(916) 929-2020
Major Markets: Computer and Office

Vendors

Equipment Manufacturing, Dealer/Distributor
Target Industries: Restaurants, Hotels
Target Applications: Accounts Payable, Job Costing
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Karen Reed
Head of Sales: Robert Park
Head of Software: Britt Holbrook
Head of Engineering: Ed Reisenweber
Head of Customer Service: Jeff Herr
Geographic Coverage: International
Year Established: 1969
Number of Employees: 80

COMPUTER SYSTEMS
26401 Harper Ave
St. Clair Shores, MI 48081
(313) 779-8709
Major Markets: Component, Computer and Communications Equipment Manufacturing, OEM, Computer Systems
Target Industries: Industrial, General Business
Target Applications: Graphics, Communications, Control System, Data Acquisition
Contacts:
Head of Marketing/Sales: Robert Martin
Geographic Coverage: National
Year Established: 1967
Number of Employees: 20

COMPUTER TALK, INC.
2800 S. Rooney Road
Morrison, CO 80465
(303) 897-5485
Major Markets: Software House, Systems House (OEM), Dealer/Distributor, Computer Manufacturing
Target Industries: Engineering
Target Applications: Graphics
Net Sales: $500.00 — $1 Million (1981)
Contacts:
Head of Marketing/Sales: Linda Blakley
Geographic Coverage: National
Year Established: 1972
Number of Employees: 10

COMTEK, INC.
4216 McCullough
San Antonio, TX 78212
(512) 828-0908
Major Markets: OEM, Computer Systems, Systems House (OEM), Data Services, Maintenance/Other Services, Computer Manufacturing
Target Industries: Retail, Contractors, Home Builders
Target Applications: Inventory, Job Costing
Contacts:
Head of Software: William L. Sang
Head of Engineering: Ronald Bowman
Geographic Coverage: Regional
Year Established: 1975
Number of Employees: 32

CONTEMPORARY CONTROL SYSTEMS, INC.
4949 Forest Ave
Downers Grove, IL 60515
(312) 963-7070
Major Markets: OEM, Computer Systems, Computer Manufacturing
Target Industries: Industrial
Target Applications: Automatic Testing, Process Monitoring, Machine Control, Scientific, Laboratory
Net Sales: $100 000 — $500 000 (1981)
Contacts:
Head of Marketing/Sales: George Thomas
Head of Software/Engineering: Ron Alban
Geographic Coverage: National
Year Established: 1975
Number of Employees: 9

CONTROL DATA CORP.
8100 34th Ave. South
P.O. Box 0
Minneapolis, MN 55417
(612) 853-8100
Major Markets: Component, Computer, Terminal, Peripheral and Communications Equipment Manufacturing, Miscellaneous Computer Supplies, Data Services, Maintenance/Other Services
Target Industries: Manufacturing, Government, Small Business, Education
Target Applications: CAD/CAM, Computer-Based Education, Petroleum Exploration, Electronic Utility Operation
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: R.D. Schmidt
Head of Sales: R. Baldelli
Head of Customer Service: J.H. Caldwell
Geographic Coverage: International
Year Established: 1957
Number of Employees: 57 000

CONVERGENT TECHNOLOGIES, INC.
2500 Augustine Drive
Santa Clara, CA 95051
(408) 727-8830
Major Market: Computer Manufacturing
Target Industries: OEM
Net Sales: $25 Million — $100 Million (1982)
Contacts:
Head of Marketing: Pauline Alker
Head of Engineering: Bob Garrow
Geographic Coverage: International
Year Established: 1979
Number of Employees: 700

CORONA DATA SYSTEMS, INC.
31324 Via Colinas
W. Lake Village, CA 91361
(213) 706-1505
Major Markets: Peripheral and Computer Manufacturing
Contacts:
Head of Marketing: P. Kramarz
Head of Sales: George McMurtry
Geographic Coverage: International
Year Established: 1981
Number of Employees: 35

CORPORATE DATA SCIENCES, INC.
2074 Treewood Lane
San Jose, CA 95132
(408) 946-1279
Major Markets: Computer Manufacturing, OEM, Peripherals/Terminals, Software House
Net Sales: $1 Million — $5 Million (1981)
Geographic Coverage: International
Year Established: 1979
Number of Employees: 14

CORVUS SYSTEMS, INC.
2029 O Toole Ave
San Jose, CA 95131
(408) 946-7700
Major Markets: Computer and Peripheral Manufacturing, Software House
Target Industries: Fortune 1000
Net Sales: $25 Million — $100 Million (1982)
Contacts:
Head of Marketing: Joseph D. Hughes
Head of Engineering: Mark C. Hahn
Geographic Coverage: International
Year Established: 1979
Number of Employees: 325

COSMOS SYSTEMS, INC.
439 Toyama
Sunnyvale, CA 94086
(408) 744-0721
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: Ray Jones
Geographic Coverage: International
Year Established: 1980
Number of Employees: 35

CRAY RESEARCH, INC.
608 Second Ave. S.
Minneapolis, MN 55402
(612) 333-5889
Major Market: Computer Manufacturing
Target Industries: Scientific Research, Engineering, Weather, Aerospace
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Michael Dickey
Head of Sales: Bruce N. Kasson
Head of Software: Margaret A. Loftus
Head of Engineering: Les T. Davis
Head of Customer Service: Don Whiting
Geographic Coverage: International
Year Established: 1972
Number of Employees: 50

CRC SYSTEMS, INC.
1145 W. Collins Ave
Orange, CA 92667
(714) 633-8660
Major Market: Computer Manufacturing
Target Industries: Retail, Supermarkets
Target Applications: Management
Geographic Coverage: International
Year Established: 1963
Number of Employees: 14

CROMEMCO, INC.
280 Bernardo Ave
Mountain View, CA 94043
(415) 964-7400
Major Markets: Component, Computer and Peripheral Manufacturing
Contacts:
Head of Marketing: Andrew Processini
Head of Engineering: Dr. Roger Melton
Geographic Coverage: National
Year Established: 1975
Number of Employees: 800

CWI TERMINAL CORP.
250 Crossways Park Drive
Woodbury, NY 11797
(516) 364-2121
Major Markets: Computer and Terminal Manufacturing, Software House
Contacts:
Head of Marketing: Brian Stephens
Geographic Coverage: International
Year Established: 1973
Number of Employees: 250

CYBERSYSTEMS, INC.
7540 S. Memorial Pkwy.
Huntsville, AR 35802
(205) 883-4410
Major Markets: Component and Computer Manufacturing, OEM, Computer Systems
Target Industries: OEM, Manufacturing

Target Applications: Machine Control, Industrial Monitoring
Net Sales: $500,000 — $1 Million (1981)
Contacts:
Head of Marketing: L. Michael Long
Head of Engineering: Dennis Sierk
Geographic Coverage: National
Year Established: 1974
Number of Employees: 25

CYB SYSTEMS, INC.
6448 Highway 290E
Austin, TX 78723
(512) 458-3324
Major Market: Computer Manufacturing
Target Industries: OEM
Target Applications: Hospital and Pharmaceutical Supplies, Aircraft
Contacts:
Head of Marketing: Brian Fugate
Geographic Coverage: International
Year Established: 1982
Number of Employees: 40

DAIST SYSTEMS CORP.
139 Kifer Court
Sunnyvale, CA 94086
(408) 773-9111
Major Markets: Computer Manufacturing, OEM Computer Systems, Software House, Dealer/Distributor, Maintenance/Other Services, Miscellaneous Computer Supplies
Target Industries: Engineering
Target Applications: Computer-Aided Engineering
Contacts:
Head of Marketing: Harvey Jones
Head of Sales: Greg Lynott
Head of Software: Ram Bann
Head of Customer Service: David Stamm
Geographic Coverage: International
Year Established: 1980
Number of Employees: 100

DATACOM CORP.
245 E. Sixth Street
St. Paul, MN 55101
(612) 292-8186
Major Markets: Computer and Communications Equipment Manufacturing
Target Industries: Insurance, Legal, Business
Contacts:
Head of Marketing/Sales: John Zantz
Head of Engineering: Al Nuendorf
Head of Customer Service: Jerry Thombeck
Geographic Coverage: International
Year Established: 1979
Number of Employees: 24

DATA GENERAL CORP.
4400 Computer Drive
Westboro, MA 01580
(817) 366-8911
Major Markets: Computer Terminal and Peripheral Manufacturing
Net Sales: Over $100 Million (1981)
Contacts:
Head of Sales: Frank M. Keaney
Head of Customer Service: Frank P. Silkman
Geographic Coverage: International
Year Established: 1968
Number of Employees: 15,000

DATAMAC COMPUTER SYSTEMS, INC.
680 Almanor Ave.
Sunnyvale, CA 94086
(408) 735-0323
Major Markets: Component, Computer and Peripheral Manufacturing, OEM Peripherals/Terminals
Target Industries: OEM
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing/Sales: Don Smith
Head of Engineering: Dr. Gordon Keller
Geographic Coverage: International
Year Established: 1980
Number of Employees: 56

DATA-MAX
1965 Pratt Blvd.
Elk Grove Village, IL 60007
(312) 981-8205
Major Markets: Computer Terminal and Peripheral Manufacturing, OEM Computer Systems
Target Applications: Animation, Graphics
Contacts:
Head of Marketing: Stuart Tanaka
Head of Sales: Justin Crowley
Head of Engineering: Ron Chan
Geographic Coverage: International
Year Established: 1975
Number of Employees: 10

DATA/MEDIA CORP.
7401 Central Highway
Pennsauken, NJ 08109
(609) 665-5400
Major Markets: Computer and Terminal Manufacturing, OEM Peripherals/Terminals, Systems House (OEM)
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Frank Zeis
Head of Engineering: Ron Johnson
Geographic Coverage: International
Year Established: 1969
Number of Employees: 250

DATAPOINT CORP.
9725 Datapoint Drive
San Antonio, TX 78284
(512) 699-7000
Major Markets: Software House; Peripheral, Computer Communications Equipment and Office Equipment Manufacturing, OEM Computer Systems, Dealer/Distributor, Maintenance/Other Services
Target Industries: General Business, Scientific, Government
Target Applications: DDP, WP, OA, Electronic Messaging
Net Sales: More than $100 Million (1982)
Contacts:
Head of Marketing: Lawrence Seligman
Head of Sales: Daniel A. Hosage
Head of Engineering: Victor D. Poor
Head of Customer Service: Joseph C. Ciasullo
Geographic Coverage: International
Year Established: 1969
Number of Employees: 7,000

DATARAM CORP.
Princeton Road
Cranbury, NJ 08512
(609) 799-0071
Major Markets: Component, Peripheral and Computer Manufacturing, OEM Computer Systems
Target Industries: Manufacturing
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Peter Yeatman
Head of Engineering: Bernie Hellngel
Geographic Coverage: International
Year Established: 1967
Number of Employees: 200

DATA TECHNOLOGY INDUSTRIES
701 A Whitney St.
San Leandro, CA 94577
(415) 638-1206
Major Markets: Computer Manufacturing, Software House, Systems House (OEM), Dealer/Distributor
Target Industries: Banking, OEM, Government
Target Applications: Accounting, WP, Forecasting, Modeling
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Marketing/Sales: Keith Skipper
Head of Engineering: Frank Adams
Geographic Coverage: International
Year Established: 1978
Number of Employees: 30

DATA TERMINAL & COMMUNICATION
590 Division St.
Campbell, CA 95008
(408) 378-1112
Major Markets: Peripheral and Computer Manufacturing, OEM Computer Systems
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing/Sales: John Williams
Head of Software/Engineering: Rod Friedline
Geographic Coverage: International
Year Established: 1968
Number of Employees: 80

DATA TOOLS INTERNATIONAL, INC.
5470 N.W. Ionisbrook Place
Portland, OR 97229
(503) 645-4604
Major Market: Computer Manufacturing
Target Industries: OEM Distributors
Net Sales: Less than $100,000 (1981)
Contacts:
Head of Marketing: Don Dunstan
Geographic Coverage: National
Year Established: 1978
Number of Employees: 5

DATAVUE CORP.
1911 22nd Ave. S.
Seattle, WA 98144
(206) 322-9330
Major Markets: Computer Component and Terminal Manufacturing, Software House, OEM Computer Systems
Target Industries: Financial, Office Automation, CAD
Target Applications: CP/M, CAD, General Business
Contacts:
Head of Marketing: Susan E. Jarvis
Head of Engineering: Gary Hasson
Head of Customer Service: Perry Murless
Geographic Coverage: International
Year Established: 1974
Number of Employees: 50

DATAWEST CORP.
7333 E. Helm Drive
Scottsdale, AZ 85260
(602) 948-3280
Major Markets: Computer and Peripheral Manufacturing, OEM Computer Systems, Systems House (OEM)
Target Industries: Geophysical, Vibration, Nuclear, Engineering
Target Applications: Data Acquisition, Fluid Monitoring, Vibration Analysis, Measurement
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing/Engineering: James Buckley
Geographic Coverage: International
Year Established: 1968
Number of Employees: 12

DATEC, INC.
Suite 2114
2860 S. Circle Drive
P.O. Box 16668
Colorado Springs, CO 80935
(303) 579-0166
Major Market: Computer Manufacturing
Target Industries: Manufacturing, Utilities
Target Applications: Inventory Control, Data Collection
Contacts:
Head of Engineering: Will Hones
Head of Customer Service: Mike Welch
Geographic Coverage: International
Year Established: 1983
Number of Employees: 15

DATRICON CORP.
200 Datricon Plaza
Lake Oswego, OR 97034
(503) 636-7671
Major Markets: OEM Computer Systems, Peripheral and Computer Manufacturing
Target Industries: Manufacturing
Target Applications: Process Control
Contacts:
Head of Marketing: Rob Schram
Head of Engineering: David Baasch
Geographic Coverage: International
Year Established: 1979
Number of Employees: 40

DAVID COMPUTER, INC. U.S.A.
1881 Kaiser Ave.
Irvine, CA 92714
(714) 966-1717
Major Market: Computer Manufacturing
Contacts:
Head of Engineering: Hans Boeker
Geographic Coverage: International
Year Established: 1979
Number of Employees: 25

DAVIDGE CORP.
Suite X
1951 Colony St.
Mountain View, CA 94043
(415) 964-9497
Major Market: Computer

Manufacturing
Target Industries: OEM Distributors
Contacts:
Head of Marketing: Susan Sullivan
Geographic Coverage: International
Year Established: 1982
Number of Employees: 8

DELTA PRODUCTS, INC.
15392 Assembly Lane
Huntington Beach, CA 92649
(714) 898-2492
Major Markets: Computer Manufacturing, Dealer/Distributor
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Joe Kazemieh
Geographic Coverage: International
Year Established: 1976
Number of Employees: 40

DENELCOR, INC.
17000 E. Ohio Place
Aurora, CO 80017
(303) 337-7900
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: J. Philip Carley
Head of Sales: Russell Saunders
Head of Software: John Lennon
Head of Engineering: Richard Woerner
Number of Employees: 160

DICOM, INC.
715 N. Pastoria Ave.
Sunnyvale, CA 94086
(408) 732-1060
Major Markets: Computer and Peripheral Manufacturing
Contacts:
Head of Marketing: Al Roberts
Head of Engineering: Hun-Sun Chen
Geographic Coverage: International
Year Established: 1969
Number of Employees: 20

DIGICOMP RESEARCH CORP.
Terrace Hill
Ithaca, NY 14850
(607) 273-5900
Major Market: Computer Manufacturing
Target Industries: Government, Military
Net Sales: $500,000 — $1 Million (1981)
Contacts:
Head of Marketing/Sales: Jeff Cox
Head of Software: Jim Elkins
Head of Engineering: Dean Eckstrom
Geographic Coverage: National
Year Established: 1975
Number of Employees: 25

DIGIDYNE CORP.
4901 Morena Blvd.
Building 600
San Diego, CA 92117
(618) 483-0364
Major Markets: Component and Computer Manufacturing, OEM Peripherals/Terminals
Contacts:
Head of Marketing: Bill Job
Geographic Coverage: International
Year Established: 1977
Number of Employees: 68

DIGILOG, INC.
1370 Welsh Road
Montgomeryville, PA 18936
(215) 628-4530
Major Markets: Computer Component and Communications Equipment Manufacturing, OEM Computer Systems
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing/Sales: Roy Gemberling
Geographic Coverage: International
Year Established: 1967
Number of Employees: 175

DIGITAL EQUIPMENT CORP.
146 Main St.
Maynard, MA 01754
(617) 897-5111
Major Markets: Component, Computer Terminal, Peripheral and Communications Equipment Manufacturing, Software House, Dealer/Distributor, Maintenance/Other Services, Miscellaneous Computer Supplies
Net Sales: More than $100 Million (1981)
Contacts:
Head of Engineering: G. Gordon Bell
Geographic Coverage: International
Year Established: 1957
Number of Employees: 67,000

DIGITAL MICROSYSTEMS, INC. (DMS)
1840 Embarcadero
Oakland, CA 94606
(414) 532-3686
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: Charles A. Morrissey
Geographic Coverage: International
Number of Employees: 50

DIGITAL PATHWAYS, INC.
1060 E. Meadows Circle
Palo Alto, CA 94303
(415) 493-5544
Major Markets: OEM Computer Systems, Peripheral and Computer Manufacturing
Target Applications: Time Clocking, Computer Monitoring
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: John Anderson
Head of Customer Service: D. Uggla
Geographic Coverage: International
Year Established: 1970
Number of Employees: 25

DIGITAL SYSTEMS CORP.
3 Main St.
Walkersville, MD 21793
(301) 845-4141
Major Markets: Component and Computer Manufacturing, Software House, Data Services, Maintenance/Other Services, OEM Computer Systems, Systems House (OEM)
Target Industries: General Business
Target Applications: Accounting, Payroll, Inventory
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Sales: Thomas C. Tamacco
Head of Software: John W. Ruwet
Head of Engineering: Robert Boyer
Geographic Coverage: Regional
Year Established: 1975
Number of Employees: 85

DIGITAL TECHNOLOGY INTERNATIONAL
1200 South 500 West
Orem, UT 84058
(801) 226-2984
Major Markets: Computer Manufacturing, Software House
Target Industries: Printing, Publishing, Real Estate
Target Applications: Data Entry, Typesetting
Contacts:
Head of Marketing: Judi Leetham
Head of Engineering: John Terry
Geographic Coverage: National
Year Established: 1969
Number of Employees: 50

DIGITAN SYSTEMS, INC.
5007 16th Ave.
Brooklyn, NY 11204
(212) 436-3777
Major Markets: Computer Manufacturing, OEM Computer Systems, Software House, Systems House (OEM)
Target Industries: Manufacturing, Standard Business Equipment, Professional Market, Rental Management
Target Applications: Invoicing, Payroll, CAD/CAM
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing/Sales: Abraham Phifer
Head of Software: Lazer Pollock
Head of Engineering: Milton Spinner
Geographic Coverage: National
Year Established: 1976
Number of Employees: 30

DIRECT, INC.
4201 Burton Drive
Santa Clara, CA 95054
(408) 980-1414
Major Markets: Computer and Terminal Manufacturing
Target Industries: Retail
Contacts:
Head of Marketing: Steve Auvitore
Geographic Coverage: International
Year Established: 1978
Number of Employees: 125

DISPLAY DATA CORP.
Executive Plaza IV
Hunt Valley, MD 21031
(800) 638-1100
Major Markets: Computer Manufacturing, Maintenance/Other Services
Target Industries: Automotive, Trucking, Agriculture, Soft Drinks
Target Applications: Accounting, Inventory, Route Distribution, Vending Machine Control
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Sales: Jack Person
Head of Customer Service: Richard Songer
Geographic Coverage: National
Year Established: 1973
Number of Employees: 500

D & N MICRO PRODUCTS, INC.
3702 N. Wells St.
Fort Wayne, IN 46808
(219) 485-6414
Major Markets: Component and Component Manufacturing, OEM Computer Systems, Software House, Dealer/Distributor, Maintenance/Other Services
Target Industries: Manufacturing, Professional
Net Sales: $500,000 — $1 Million (1981)
Contacts:
Head of Sales: Jim Kuker
Geographic Coverage: International
Year Established: 1978
Number of Employees: 10

DOCUTEL OLIVETTI CORP.
Office Products Division
155 White Plains Road
Tarrytown, NY 10591
(914) 631-8100
Major Markets: Computer Terminal, Peripheral and Communications Equipment Manufacturing, Dealer/Distributor, Maintenance/Other Services
Target Industries: General Business
Target Applications: OA, General Accounting
Contacts:
Head of Marketing: Arthur Oppenberg
Geographic Coverage: International
Year Established: 1955

DP BUSINESS SYSTEMS, INC.
111 El Monroe Way
Concord, CA 94518
(415) 680-0215
Major Markets: Computer and Peripheral Manufacturing, OEM Peripherals/Terminals
Target Industries: Photographics
Target Applications: Production Control and Management Accounting
Contacts:
Head of Marketing: Mike Unell
Geographic Coverage: National
Year Established: 1978
Number of Employees: 5

DUAL SYSTEMS CORP.
2530 San Pablo
Berkeley, CA 94702
(415) 549-3890
Major Markets: OEM Computer Systems and Peripherals/Terminals, Computer Manufacturing
Target Industries: Education, OEM
Target Applications: Software Development
Net Sales: $100,000 — $500,000 (1981)
Contacts:
Head of Sales: Peter DeVries
Geographic Coverage: National
Year Established: 1979
Number of Employees: 30

DURANGO SYSTEMS, INC.
3003 N. First St.
San Jose, CA 95134
(408) 946-5000
Major Markets: Computer and Peripheral Manufacturing, OEM Computer Systems and Peripherals/Terminals, Software House
Contacts:
Head of Marketing: Charles Waggoner
Head of Sales: Donald Shaw
Geographic Coverage: International
Year Established: 1977

Number of Employees: 175

SYNASYTE
521 Cottonwood Drive
Milpitas CA 95035
(408) 263-1221
Major Markets: Computer Manufacturing Systems House (OEM)
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing Jerry Keeran
Head of Software John Borders
Head of Engineering Ed Fauvre
Geographic Coverage: International
Year Established: 1977
Number of Employees: 100

EAGLE COMPUTER, INC.
2908 Oregon Court
Building I-7
Torrance CA 90503
(213) 618-9642
Major Markets: Computer and Peripheral Manufacturing Maintenance/Other Services
Target Industries: Small Business
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing Bill Roland
Head of Sales Ron Petersen
Head of Engineering Gary Kappenman
Head of Customer Service Chuck Fowler
Geographic Coverage: International
Number of Employees: 250

ECS MICROSYSTEMS, INC.
215 Devcon Drive
San Jose CA 95112
(408) 286-4200
Major Markets: OEM Computer Systems Systems House (OEM) Dealer/Distributor, Computer Manufacturing
Target Industries: DP
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Marketing Larry Hofwade
Head of Engineering Jon Garman
Geographic Coverage: International
Year Established: 1979
Number of Employees: 80

E & H ELECTRONICS
2699 E 28th St
Signal Hill CA 90806
(213) 426-3327
Major Markets: OEM Computer Systems Systems House (OEM) Data Services, Computer Manufacturing
Target Industries: Electronics Power Telecommunications
Net Sales: $500 000 — $1 Million (1981)
Contacts:
Head of Marketing/Sales Dr Claude Lindquist
Head of Software Mark Fowler
Head of Engineering Jim Skov
Geographic Coverage: National
Year Established: 1977
Number of Employees: 7

ELECTRONIC CONTROL TECHNOLOGY, INC.
763 Ramsey Ave
Hillside NJ 07205
(201) 686-8080
Major Market: Computer Manufacturing
Target Industries: OEM
Net Sales: $100 000 — $500 000 (1981)
Contacts:
Head of Marketing Vincent Dupre
Geographic Coverage: National
Year Established: 1975
Number of Employees: 10

E A L INSTRUMENTS, INC.
61 First St
Derby CT 06418
(203) 735-8774
Major Markets: Computer Manufacturing OEM Computer Systems
Target Industries: Education
Target Applications: Training
Contacts:
Head of Marketing Frank W Gregorio
Head of Sales Richard J Vuilleguez
Geographic Coverage: International
Year Established: 1987
Number of Employees: 45

ELITE CORP.
906 N Main St
Wichita KS 67203
(316) 265-0959
Major Market: Computer Manufacturing
Target Industries: High-Technology
Target Applications: Robotics, Listings
Geographic Coverage: International
Year Established: 1982
Number of Employees: 10

EPIC COMPUTER PRODUCTS, INC.
18361 Bandilier Circle
Fountain Valley CA 92708
(714) 964-4722
Major Markets: Computer Manufacturing Dealer/Distributor
Contacts:
Head of Marketing Roy Hollister
Geographic Coverage: International
Year Established: 1982
Number of Employees: 35

EPSON AMERICA, INC.
3415 Kashiwa St
Torrance CA 90505
(213) 539-9140
Major Markets: Component Computer and Peripheral Manufacturing, OEM Computer Systems and Peripherals/Terminals
Geographic Coverage: International
Year Established: 1978

SSSEX ENGINSERING CO.
Essex Industrial Park
Essex CT 06426
(203) 767-8221
Major Markets: Component Computer and Terminal Manufacturing
Target Industries: Government, Hospital Food Processing, Industrial
Target Applications: Data Acquisition
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing Bruce Joslyn
Geographic Coverage: Regional
Year Established: 1962
Number of Employees: 85

SSTIMATION, INC.
805-L Barkwood Court
Linthicum Height MD 21090
(301) 636-5680
Major Markets: Component and Computer Manufacturing OEM Computer Systems Systems House (OEM) Dealer Distributor
Target Industries: Construction
Target Applications: Estimating
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing Dianne Schroeder
Head of Software Gary Kissinger
Head of Engineering N Joel Kehm
Geographic Coverage: International
Year Established: 1973
Number of Employees: 70

ETR SYAR SYSTEMS
1316 N Avalon Blvd
Wilmington CA 91744
(213) 835-2421
Major Markets: Software House, Systems House (OEM), Maintenance/Other Services Computer Manufacturing
Contacts:
Head of Marketing Tom Wehrt
Geographic Coverage: National
Year Established: 1971
Number of Employees: 25

EUCLID COMPUTER, INC.
3699 W 240th St
Torrance CA 90505
(213) 373-9316
Major Markets: Computer Manufacturing Dealer/Distributor
Target Industries: Small Business
Contacts:
Head of Marketing Gordon Walsh
Head of Engineering Kourosh Hamzeh
Geographic Coverage: National
Year Established: 1981
Number of Employees: 5

EXG SYSTEMS CORP.
1089 Airport Road
Minden NV 89423
(702) 782-8166
Major Markets: Computer Manufacturing Dealer/Distributor
Target Industries: Dealers
Contacts:
Head of Marketing Mack Graham
Head of Engineering D E Grodecki
Geographic Coverage: International
Year Established: 1979
Number of Employees: 25

EZ DATA, INC.
Newington Industrial Park
Newington NH 03801
Major Markets: Computer Manufacturing
Target Industries: General Business
Target Applications: General Business
Contacts:
Head of Marketing Greg Wing
Head of Software Deanna Driscoll
Geographic Coverage: International
Year Established: 1978
Number of Employees: 50

FACIT, INC.
235 Main Dunstable Road
Nashua NH 03061
(603) 883-4157
Major Markets: Terminal Computer and Office Equipment Manufacturing
Contacts:
Head of Marketing Odd Bjerkmann
Head of Sales Eric Binder
Geographic Coverage: International
Year Established: 1938
Number of Employees: 200

FLOATING POINT SYSTEMS, INC.
P O Box 23489
Portland OR 97223
(503) 641-3151
Major Market: Computer Manufacturing
Target Industries: Scientific Engineering
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing Chris Soter
Geographic Coverage: International
Year Established: 1970
Number of Employees: 1,300

FLORIDA COMPUTER GRAPHICS
1000 Sand Pond Road
Lake Mary FL 32746
(305) 321-3000
Major Markets: Computer and Peripheral Manufacturing
Target Industries: OEM
Target Applications: Graphics
Contacts:
Head of Marketing Michael Haines
Geographic Coverage: International
Year Established: 1981
Number of Employees: 100

FORMATION, INC.
823 E Gate Drive
Mount Laurel NJ 08054
(609) 234-5020
Major Markets: Computer Manufacturing, OEM Computer Systems and Peripherals/Terminals Software House
Target Industries: Manufacturing OEM
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing Arthur Mendelsohn
Head of Engineering Barry I Kessler
Head of Customer Service William A Rennie
Year Established: 1970
Number of Employees: 260

FORTUNE SYSTEMS CORP.
1501 Industrial Road
San Carlos CA 94070
(415) 595-8444
Major Markets: Computer Manufacturing Software House
Target Industries: Small Business Stste Retail Systems Houses Direct Marketing
Net Sales: $25 Million — $100 Million (1982).
Contacts:
Head of Marketing David Van Den Berg
Head of Software Homer Dunn
Geographic Coverage: International
Year Established: 1981
Number of Employees: 500

FORWARD TECHNOLOGY, INC.
2175 Martin Ave
Santa Clara CA 95050
(408) 988-2378
Major Market: Computer Manufacturing
Target Industries: OEM

Engineering
Target Applications: Graphics
Contacts:
Head of Marketing/Sales: Robert Angus
Head of Software: Ray Moorman
Head of Engineering: James Richardson
Geographic Coverage: International
Year Established: 1980
Number of Employees: 30

FOUR-PHASE SYSTEMS, INC.

Suite 1132
17 Battery Place
Cupertino, CA 95014
(408) 255-0900
Major Markets: Component, Computer Terminal Peripheral and Communications Equipment Manufacturing, OEM Computer Systems, Systems House (OEM) Dealer/Distributor, Maintenance/Other Services
Target Industries: Manufacturing, Medical, Government, Business
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Tony Yates
Head of Software: Edward Vance
Geographic Coverage: International
Year Established: 1969
Number of Employees: 4,500

FRANCHISE MAILING SYSTEMS
3420 W. Capitol Drive
Milwaukee, WI 53216
(414) 444-9980
Major Markets: OEM Computer Systems, Data Services, Dealer/Distributor, Computer Manufacturing
Target Industries: Bank, Retail
Contacts:
Head of Marketing/Software: Mark Resh
Head of Sales: Glenn Bucott
Geographic Coverage: International
Year Established: 1952
Number of Employees: 65

FRANKLIN COMPUTER CORP.
7030 Colonial Highway
Pennsauken, NJ 08109
(609) 488-1700
Major Markets: Component, Computer and Peripheral Manufacturing, Software House
Geographic Coverage: International
Year Established: 1981
Number of Employees: 113

FRIENDS AMIS, INC.
505 Beach St.
San Francisco, CA 94133
(415) 928-2800
Major Market: Computer Manufacturing
Target Industries: Manufacturing, Distribution, Government
Contacts:
Head of Marketing: Joan David Garcia
Geographic Coverage: International
Year Established: 1978
Number of Employees: 50

FUJITSU MICROELECTRONICS, INC.
Professional Microsystems Division
3320 Scott Blvd
Santa Clara, CA 95051
(408) 980-0755
Major Markets: Computer Manufacturing, OEM Computer Systems
Contacts:
Head of Sales: Michael Newman
Geographic Coverage: International
Year Established: 1982
Number of Employees: 40

GAVILAN COMPUTER CORP.
240 Hacienda St.
Campbell, CA 95008
(408) 379-8000
Major Markets: Computer Manufacturing, Dealer/Distributor
Target Industries: Insurance, Sales, Field Auditors
Contacts:
Head of Marketing: John Duffy
Head of Sales: Wayne Sennett
Head of Engineering: John Zepecki
Geographic Coverage: International
Year Established: 1982
Number of Employees: 70

GENERAL AUTOMATION, INC.
1055 Southeast St.
P.O. Box 4883
Anaheim, CA 92803
(714) 778-4800
Major Markets: Computer Manufacturing, Dealer/Distributor Maintenance/Other Services
Target Industries: OEM, Systems Houses, Banking
Target Applications: Industrial Automation
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Donald Heitt
Head of Customer Service: Shirley Stough
Geographic Coverage: International
Year Established: 1967
Number of Employees: 1,700

GENERAL ROBOTICS CORP.
57 N. Main St.
Hartford, WI 53027
(414) 673-6800
Major Markets: Component and Computer Manufacturing
Target Industries: OEM, System House
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Sales: Donald Woelz
Head of Engineering: Barbara Pick
Head of Customer Service: Glenn Rodgers
Geographic Coverage: International
Year Established: 1974
Number of Employees: 50

GIMIX, INC.
1337 W. 37th Place
Chicago, IL 60609
(312) 927-5510
Major Markets: OEM Computer Systems, Computer Manufacturing
Target Industries: Dealers
Contacts:
Head of Marketing: Richard Don
Geographic Coverage: International
Year Established: 1975
Number of Employees: 15

GMR, INC.
1048 E. Burgrove St.
Carson, CA 90746
(213) 639-4663
Major Market: Computer Manufacturing
Target Industries: Engineering, Scientific, Education, Professional, CAD/CAM
Target Applications: Field Service
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing: Harvey Mushman
Geographic Coverage: International
Year Established: 1977
Number of Employees: 100

GOLDEN WEST COMPUTERS
60 North 300 West
Provo, UT 04601
(801) 377-2177
Major Markets: Component, Computer and Peripheral Manufacturing, Software House
Net Sales: $100,000 — $500,000 (1981)
Contacts:
Head of Sales: Keith Averett
Geographic Coverage: International
Year Established: 1977
Number of Employees: 17

GOULD, INC.

SEL Computer Systems Division
6901 W. Sunrise Blvd.
Fort Lauderdale, FL 33313
(305) 587-2900
Major Markets: OEM Peripherals/Terminals, Computer Manufacturing, Software House
Target Industries: Aerospace, Military, Nuclear, Fossil Fuel
Target Applications: Flight Simulation, Energy Monitoring/Control, Lab Computation, Factory Automation
Contacts:
Head of Marketing: John Muczko
Head of Sales: Calvin Shoemaker
Head of Software: Robert Bergmann
Head of Engineering: Michael Smith
Geographic Coverage: International
Year Established: 1981
Number of Employees: 2,500

GOULD, INC.
Factory Automation Division
10 Pine St. Extension
Nashua, NH 03060
(603) 880-6543
Major Markets: Dealer/Distributor Maintenance/Other Services, Computer Manufacturing, OEM Computer Systems
Target Industries: Manufacturing
Target Applications: Production Control, Process Control
Contacts:
Head of Marketing: Robert H. Ryan
Geographic Coverage: National
Year Established: 1976
Number of Employees: 50

GRID SYSTEMS CORP.
2535 Garcia Ave.
Mountain View, CA 94043
(415) 961-4800
Major Markets: Computer Manufacturing, Software House
Target Industries: Fortune 1000, Finance
Geographic Coverage: National
Year Established: 1979
Number of Employees: 200

GRIFFIN TECHNOLOGY, INC.
Amsec Division
1675 W. 9th St.
Long Beach, CA 90813
(213) 437-0186
Major Markets: Computer and Terminal Manufacturing, OEM Computer Systems
Target Industries: Education, Business, Food Service
Contacts:
Head of Marketing: Art Brent
Head of Software: Antonius W. Satyadi
Head of Engineering: John C. Darjany
Geographic Coverage: National
Year Established: 1962
Number of Employees: 150

HARDY COMPUTER CORP.
11430 Denton Drive
Dallas, TX 75229
(214) 620-8340
Major Markets: Computer Manufacturing
Net Sales: $100,000 — $500,000 (1981)
Contacts:
Head of Engineering: H.S. Hardy III
Geographic Coverage: International
Year Established: 1979
Number of Employees: 12

HARRIS CORP.
Computer Systems Division
2102 W. Cypress Creek Road
Ft. Lauderdale, FL 33310
(305) 974-1700
Major Markets: Computer Manufacturing, OEM Computer Systems, Software House, Maintenance/Other Services
Target Industries: Scientific, Engineering, Education
Target Applications: Simulation, CAD/CAM
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Sales: J. Dromaner
Head of Software: Joe Payne
Geographic Coverage: International
Year Established: 1967
Number of Employees: 1,000

HARTRONIX, INC.
1201 N. Stadem Drive
Tempe, AZ 85281
(602) 966-7215
Major Markets: Computer and Terminal Manufacturing, OEM Computer Systems, OEM Peripherals/Terminals, Software House
Target Industries: Automotive Test Equipment Manufacturing
Target Applications: Language, Automotive Testing, Forth Language
Net Sales: $500.00 — $1 Million (1981)
Contacts:
Head of Engineering: John R. Hart
Geographic Coverage: National
Year Established: 1976
Number of Employees: 10

HEATH CO.
Benton Harbor, MI 49022
(616) 982-3200
Major Markets: Dealer/Distributor, Computer, Terminal and Peripheral Manufacturing, OEM Computer Systems, Software House
Target Industries: Small Business, Education, Process Control
Net Sales: Over $100 Million (1982)

Contacts:
Head of Marketing David Altwies
Geographic Coverage: International
Year Established: 1930
Number of Employees: 1,500

HEURIKON CORP.
3001 Latham Drive
Madison, WI 53713
(608) 271-8700
Major Markets: Communications Equipment, Component and Computer Manufacturing, OEM Computer Systems
Target Industries: Communications
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Engineering Jeffrey Mattox
Geographic Coverage: National
Year Established: 1972
Number of Employees: 30

HEWLETT-PACKARD CO.
3000 Hanover St
P O Box 10301
Palo Alto, CA 94304
Major Markets: Component, Computer, Terminal, Peripheral and Office Equipment Manufacturing, Maintenance/Other Services, Miscellaneous Computer Supplies, Software House
Target Industries: Engineering, Manufacturing
Target Applications: Office Automation, CAD/CAM
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing Al Oliveno
Head of Sales Jim Arthur
Head of Software Andre Schwager
Geographic Coverage: International
Year Established: 1939
Number of Employees: 67,000

HITACHI AMERICA, LTD.
2696 Peachtree Square
Doraville, GA 30360
(404) 458-6921
Major Markets: Component, Computer, Communications Equipment and Office Equipment Manufacturing
Target Industries: Telephone, Distribution, Commercial
Contacts:
Head of Sales Charles Kenmore
Head of Engineering Wally Ives
Geographic Coverage: International
Year Established: 1973
Number of Employees: 80

HONEYWELL, INC.

Information Systems Division
Honeywell Plaza
Minneapolis, MN 55408
(612) 870-5200
Major Markets: Computer, Terminal, Peripheral, Communications Equipment and Office Equipment Manufacturing, OEM Peripherals/Terminals and Computer Systems, Software House, Data Services, Dealer/Distributor, Maintenance/Other Services
Target Industries: Manufacturing/Distribution, Government, Education, Airline
Net Sales: Over $100 Million (1981)
Contacts:
Head of Marketing Richard R Douglas
Geographic Coverage: International
Year Established: 1955
Number of Employees: 27,000

HOUSTON ENGINEERING RESEARCH CORP.
7250 Wynnwood Drive
P O Box 3246
Houston, TX 77001
(713) 869-9371
Major Markets: Computer Manufacturing, OEM Peripherals/Terminals and Computer Systems, Software House, Systems House (OEM), Maintenance/Other Services
Target Industries: Chemical, Paper, Utilities
Target Applications: Supervisory Control and Data Acquisition, Tank Gauging, Automotive Production Reporting
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Sales/Customer Service John A Chapman
Head of Engineering Joseph Dryer
Geographic Coverage: International
Year Established: 1960

IBM
Old Orchard Road
Armonk, NY 10504
(914) 765-1900
Major Markets: Component, Computer, Terminal, Peripheral, Communications Equipment and Office Equipment Manufacturing, Software House, Data Services, Dealer/Distributor, Maintenance/Other Services, Miscellaneous Computer Supplies
Net Sales: More than $100 Million (1982)
Contacts:
Head of Customer Service Thomas M Liptak
Geographic Coverage: International
Number of Employees: 350,000

ICL, INC.
Suite 300
415 E Airport Freeway
Irving, TX 75062
(214) 258-8525
Major Market: Computer Manufacturing
Target Industries: Retail, Manufacturing
Target Applications: Data Collection
Contacts:
Head of Marketing Ron Kiyohiyo
Geographic Coverage: National
Year Established: 1972
Number of Employees: 55

IDEOGRAPHIX, INC.
532 Mercury Drive
Sunnyvale, CA 94086
(408) 739-1290
Major Markets: Computer, Terminal, Peripheral and Communications Equipment Manufacturing, OEM Peripherals/Terminals and Computer Systems, Data Services, Systems House (OEM), Maintenance/Other Services, Miscellaneous Computer Supplies
Target Industries: DP and Communication Systems in Chinese
Target Applications: Data Entry, Telex in Chinese
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing C K Yeh
Head of Sales Eric Wang
Head of Software David Chang
Head of Engineering Chan A Yeh
Head of Customer Service George Tsai
Geographic Coverage: Far East
Year Established: 1972
Number of Employees: 55

ILENE INDUSTRIES DATA SYSTEMS, INC.
301 Stanley Blvd
Selbyville, TN 37160
(615) 684-8731
Major Markets: Computer and Communications Equipment Manufacturing, Maintenance/Other Services
Target Industries: Xerox Corp Sigma Users, Engineering
Contacts:
Head of Sales John C Smith
Head of Software Raymond Nix
Head of Engineering Donald J Friedman
Head of Customer Service Rick Chambless
Geographic Coverage: National
Year Established: 1981
Number of Employees: 15

IMS INTERNATIONAL
2800 Lockheed Way
Carson City, NV 89701
(702) 883-7611
Major Markets: Computer and Peripheral Manufacturing, OEM Computer Systems
Target Industries: Commercial
Target Applications: Graphics
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Marketing Al Fiegehen
Head of Sales Richard Wallace
Head of Software Joe Carter
Head of Customer Service Jim Zakzeski
Geographic Coverage: International
Year Established: 1978
Number of Employees: 105

INCOMNET, INC.
2772 Johnson Drive
Ventura, CA 93003
(805) 654-1618
Major Markets: OEM Computer Systems, Software House, Data Services, Computer Manufacturing
Target Industries: Financial, Insurance, Automotive, Airline
Target Applications: Message Switching, Accounting, Inventory
Contacts:
Head of Marketing/Sales Ray Healy
Head of Engineering Glen Kelley
Geographic Coverage: National
Year Established: 1974
Number of Employees: 48

INDEPENDENT BUSINESS SYSTEMS, INC.
5915 Graham Court
Livermore, CA 94550
(415) 443-3131
Major Market: Computer Manufacturing
Target Industries: Engineering, Scientific, General Business
Net Sales: $500,000 — $1 Million (1982)
Contacts:
Head of Marketing Dick Gless
Geographic Coverage: International
Year Established: 1978
Number of Employees: 10

INDEP, INC.
2900 Turnpike Drive
Building No. 2
P O Box 677
Willow Grove, PA 19090
(215) 443-5550
Major Markets: Computer Manufacturing, OEM Computer Systems, Maintenance/Other Services
Target Industries: Medical, Accounting, Law, Manufacturing
Target Applications: General Accounting, Inventory, WP, Data Management
Contacts:
Head of Marketing Ross Pincus
Head of Software Douglas Jobson
Head of Engineering A Kleinschmitz
Geographic Coverage: National
Year Established: 1969
Number of Employees: 40

INFOREX, INC.
185 Middlesex Tnpk
Burlington, MA 01803
(617) 272-6470
Major Markets: Computer and Component Manufacturing, OEM Computer Systems, Systems House (OEM), Software House
Target Industries: Manufacturing, Retail, Government
Target Applications: Data Entry, File Management
Contacts:
Head of Sales Gene Parrett
Head of Engineering Russell Heneault
Geographic Coverage: International
Year Established: 1968
Number of Employees: 300

INFORMATEK STATES, INC.
5825 Peachtree Corners E
Norcross, GA 30092
(404) 449-0130
Major Markets: OEM Computer Systems, Software House, Computer Manufacturing
Target Industries: Medical
Target Applications: Diagnostics
Contacts:
Head of Marketing Kurt Farhy
Geographic Coverage: International
Year Established: 1971

INFOTECS, INC.
1 Penmeter Road
Manchester, NH 03103
(603) 624-2700
Major Markets: OEM Computer Systems, Computer Manufacturing
Target Industries: Accounting, Insurance, Contracting, Medical
Target Applications: Fuel-Oil Accounting, Job Costing, Property Management, Medical
Contacts:
Head of Marketing Calvin Holt
Head of Sales Jack Flynn
Head of Engineering Joel Weber
Geographic Coverage: National
Year Established: 1975
Number of Employees: 150

INNOTRONICS CORP.
Brooks Road
Lincoln, MA 01773
(617) 259-0600
Major Markets: Computer and Peripheral Manufacturing

Vendors

Target Industries: OEM, Distributors
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Frank Myers
Geographic Coverage: Regional
Year Established: 1977
Number of Employees: 22

INSTRUMENTATION LABORATORY, INC.
Pixel Division
1 Burtt Road
Andover, MA 01910
(617) 861-0710
Major Markets: Computer and Terminal Manufacturing
Target Industries: OEM, Medical
Net Sales: Under $100,000 (1981)
Contacts:
Head of Engineering: James McHale
Geographic Coverage: International
Year Established: 1980
Number of Employees: 120

INTEGRATED BUSINESS COMPUTERS, INC. (IBC)
21592 Marilla St
Chatsworth, CA 91311
(213) 882-9007
Major Market: Computer Manufacturing
Target Industries: Manufacturing; Banking; General Business
Geographic Coverage: International
Year Established: 1979
Number of Employees: 27

INTEGRATED DIGITAL PRODUCTS
3156 E La Palma
Unit A
Anaheim, CA 92806
(714) 632-6972
Major Markets: Computer and Peripheral Manufacturing; Software House
Target Industries: Systems Houses
Geographic Coverage: International
Year Established: 1979
Number of Employees: 5

INTEL CORP.
System Grove
2402 W Beardsley Road
Phoenix, AZ 85027
(602) 869-3805
Major Markets: Computer and Peripheral Manufacturing; Software House
Geographic Coverage: International
Year Established: 1979
Number of Employees: 20,000

INTELLIGENT SYSTEMS CORP.
225 Technology Park
Norcross, GA 30092
(404) 449-5961
Major Markets: OEM Computer Systems, Computer and Terminal Manufacturing, Maintenance/Other Services
Target Industries: Control, MIS/DP, Business Graphics, Measurement/Testing
Net Sales: $5 Million — $25 Million (1982)
Geographic Coverage: International
Year Established: 1973
Number of Employees: 375

INTELLIMAC, INC.
6001 Montrose Road
6th Floor
Rockville, MD 20852
(301) 984-8000
Major Markets: Systems House (OEM), Computer Manufacturing
Target Industries: NASA, Government
Net Sales: $500,000 — $1 Million (1981)
Contacts:
Head of Marketing: Ralph Crafts
Geographic Coverage: International
Year Established: 1978
Number of Employees: 20

INTERACTIVE SYSTEMS TECHNOLOGY, INC.
Suite 11
5259 N Tacoma Ave
Indianapolis, IN 46220
(317) 253-5760
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: Steve Maschmeyer
Geographic Coverage: International
Year Established: 1982
Number of Employees: 7

INTER-CARE SYSTEMS, INC.
2044 Armacost Ave
Los Angeles, CA 90025
(213) 826-4500
Major Markets: Computer Manufacturing, Software House, Systems House (OEM), Data Services, Dealer/Distributor
Target Industries: Medical
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Paul Marchetti
Geographic Coverage: National
Year Established: 1979
Number of Employees: 30

INTER CITY PAPERS, LTD.
Electric Division
P O Box 595
Springfield, OR 97477
(503) 726-7613
Major Market: Computer Manufacturing
Geographic Coverage: National
Year Established: 1973
Number of Employees: 5

INTERNATIONAL ENTRY SYSTEMS, INC.
408 N E 72nd St
Seattle, WA 98115
(206) 525-6800
Major Markets: Computer and Terminal Manufacturing, Software House
Target Industries: Service Bureaus
Target Applications: Data Entry
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing/Sales: Larry MacKnight
Geographic Coverage: International
Year Established: 1979
Number of Employees: 25

INTERNATIONAL TELECONTROL CORP.
P O Box 95
Edgemont, PA 19028
(215) 353-3232
Major Market: Computer Manufacturing
Target Applications: Training
Geographic Coverage: National
Year Established: 1968
Number of Employees: 10

INTERSIL SYSTEMS, INC.
10710 Tantav Ave
Cupertino, CA 95014
(408) 996-5000
Major Markets: Component and Computer Manufacturing
Target Industries: OEM
Contacts:
Head of Marketing: Jerry Zis
Head of Engineering: Jim Krehbiel
Geographic Coverage: National
Year Established: 1981

INTERTEC DAYA SYSTEMS CORP.
2300 Broad River Road
Columbia, SC 29210
(803) 798-9100
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: Ron Wells
Geographic Coverage: International
Year Established: 1973
Number of Employees: 400

IPL SYSTEMS, INC.
1370 Main St
Waltham, MA 02254
(417) 890-6620
Major Markets: Computer Manufacturing, Maintenance/Other Services
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing/Sales: William Manser
Head of Software: Charles A Cornell
Head of Engineering: Robert Marrott
Head of Customer Service: Lee Gendron
Geographic Coverage: National
Year Established: 1973
Number of Employees: 250

ITHACA INTERSYSTEMS, INC.
1650 Hanshaw Road
P.O Box 91
Ithaca, NY 14850
(607) 273-2500
Major Markets: Computer and Terminal Manufacturing, Software House
Target Industries: Dealers, OEM
Target Applications: Graphics, Business
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing/Sales: Ray D Onofrio
Head of Engineering: Jeff Moskow
Geographic Coverage: International
Year Established: 1979
Number of Employees: 100

ITHACO, INC.
Compudas Division
P O Box 6437
Ithaca, NY 14850
(607) 272-7640
Major Markets: Computer Manufacturing, OEM Peripherals/Terminals
Target Industries: Manufacturing; Power Generation
Net Sales: $5 Million — $25 Million (1981)
Geographic Coverage: National
Year Established: 1982
Number of Employees: 120

JOHOS, LTD.
1835A Dawns Way
Fullerton, CA 92631
(714) 520-0492
Major Market: Computer Manufacturing
Target Applications: POS
Geographic Coverage: International
Year Established: 1980
Number of Employees: 30

KONTRON ELECTRONICS
630 Price Ave
Redwood City, CA 94063
(415) 361-1012
Major Market: Computer Manufacturing
Target Industries: OEM
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Dennis Dolan
Geographic Coverage: International
Year Established: 1970
Number of Employees: 40

LABORATORY TECHNOLOGIES CORP.
328 Broadway
Cambridge, MA 02139
(617) 497-1010
Major Markets: Computer Manufacturing, Software House
Target Industries: Scientific, Machine Control, Process Control
Contacts:
Head of Sales: Fredrick Putnam
Head of Customer Service: David Wilson
Geographic Coverage: National
Year Established: 1981
Number of Employees: 9

LANIER BUSINESS PRODUCTS, INC.
1200 Chantilly Drive N.E.
Atlanta, GA 30324
(404) 329-8080
Major Markets: Computer and Office Equipment Manufacturing, Software House
Net Sales: More than $100 Million (1982)
Contacts:
Head of Marketing: George De Benedetto
Geographic Coverage: International
Year Established: 1934
Number of Employees: 3,000

LAZOR SYSTEMS, INC.
1050 E Duane Ave
Sunnyvale, CA 94086
(408) 735-1188
Major Market: Computer Manufacturing
Target Industries: Retail
Target Applications: Inventory Control, Purchasing, POS
Contacts:
Head of Marketing: Robert Knapp
Geographic Coverage: International
Year Established: 1978
Number of Employees: 25

LEXOR CORP.
7100 Hayvenhurst Ave
Van Nuys, CA 91406
(213) 786-1800
Major Market: Computer Manufacturing
Target Industries: Dealers
Target Applications: WP

Contacts:
Head of Marketing: Mike Connors
Geographic Coverage: International
Year Established: 1979
Number of Employees: 60

LNW RESEARCH CORP.
2620 Walnut
Tustin, CA 92680
(714) 641-8850
Major Markets: Component and Computer Manufacturing, Dealer/Distributor
Target Industries: Small Business
Contacts:
Head of Marketing: Ken Woog
Geographic Coverage: International
Year Established: 1979
Number of Employees: 40

LOBO DRIVES INTERNATIONAL
358 S Fairview Ave
Goleta, CA 93117
(805) 683-1576
Major Markets: Computer and Peripheral Manufacturing
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Doug Rex
Head of Engineering: Kirk Hobart
Geographic Coverage: International
Year Established: 1979
Number of Employees: 40

LOGICAL BUSINESS MACHINES
1294 Hammerwood Ave
Sunnyvale, CA 94086
(408) 744-1290
Major Market: Computer Manufacturing
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing: Andrea Skov-Gordon
Geographic Coverage: International
Year Established: 1974
Number of Employees: 100

MAD COMPUTER, INC.
3350 Scott Blvd
Building 13
Santa Clara, CA 95057
(408) 980-0840
Major Market: Computer Manufacturing
Target Industries: Banking, Medical, Telecommunications, Commercial
Contacts:
Head of Sales: Paul Schaut
Geographic Coverage: International
Year Established: 1982
Number of Employees: 20

MAGNUSON COMPUTER SYSTEMS, INC.
2902 Orchard Pkwy
San Jose, CA 95134
(408) 946-8100
Major Markets: OEM Computer Systems, Computer Maufacturing
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing: Jerome J. Burke
Geographic Coverage: International
Year Established: 1977
Number of Employees: 285

MANAGEMENT ASSISTANCE, INC.
Basic Four Division
14101 Myford Road
Tustin, CA 92680
(714) 731-5100
Major Market: Computer Manufacturing
Target Industries: Manufacturing, Distribution, Legal, Membership
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: William F. Rigby
Geographic Coverage: International
Year Established: 1971
Number of Employees: 1,000

MARTEC INTERNATIONAL
20 William St
Wellesley, MA 02181
(617) 237-2115
Major Markets: Computer Manufacturing, Dealer/Distributor
Target Industries: OEM
Net Sales: $25 Million — $100 Million (1982)
Contacts:
Head of Marketing: Ted Yoshida
Head of Sales: Keith Lehto
Head of Software: Don Nadel
Geographic Coverage: International
Year Established: 1974
Number of Employees: 45

MASSCOMP
543 Great Road
Littleton, MA 01460
(617) 486-9425
Major Markets: OEM Computer Systems, Computer Manufacturing
Target Industries: Engineering, Scientific; OEM
Target Applications: Computation, Graphics
Contacts:
Head of Marketing: Allan L. Wallack
Geographic Coverage: National
Year Established: 1981
Number of Employees: 45

MEASUREMENT SYSTEMS & CONTROLS, INC.
Systems Group
1601 Orangewood Ave
Orange, CA 92668
(714) 633-4480
Major Markets: Component, Computer and Peripheral Manufacturing
Target Industries: Education, Government
Target Applications: Accounting, Inventory, WP
Contacts:
Head of Marketing: Dave Jenoff
Head of Engineering: Lowell Dunn
Geographic Coverage: International
Year Established: 1978
Number of Employees: 45

MEGADATA CORP.
35 Orville Drive
Bohemia, NY 11715
(516) 589-6800
Major Markets: Computer and Office Equipment Manufacturing
Net Sales: $1 Million — $5 Million (1982)
Geographic Coverage: International
Year Established: 1967
Number of Employees: 150

MEGA/NET CORP.
806 Rt. 17
Ramsey, NJ 07446
(201) 825-7770
Major Markets: Systems House (OEM), Computer Manufacturing
Target Industries: Banking, Chemical Distributor
Target Applications: EFT
Net Sales: $1 Million — $5 Million (1981)
Geographic Coverage: International
Year Established: 1981
Number of Employees: 40

MEPCOM INTERNATIONAL, INC.
15181 Business Ave
Dallas, TX 75234
(214) 484-0640
Major Markets: Peripheral and Computer Manufacturing
Target Industries: Manufacturing; OEM, Restaurant
Target Applications: Restaurant Management
Net Sales: $500,000 — $1 Million (1981)
Geographic Coverage: National
Year Established: 1980
Number of Employees: 20

MICROCOMPUTER TECHNOLOGY, INC.
3304 W. MacArthur Blvd
Santa Ana, CA 92704.
(714) 879-9923
Major Markets: Component and Computer Manufacturing, OEM Computer Systems, Systems House (OEM)
Target Industries: Retail
Contacts:
Head of Marketing: Paul Gans
Geographic Coverage: International
Year Established: 1979
Number of Employees: 45

MICROBATA CORP.
4000 McArthur
P.O. Box 19501
Irvine, CA 92713
(714) 540-6730
Major Markets: Computer, Terminal and Peripheral Manufacturing
Target Industries: General Business
Contacts:
Head of Sales: John R. Boone
Geographic Coverage: International
Year Established: 1969
Number of Employees: 3,000

MICROMATION, INC.
1620 Montgomery St
San Francisco, CA 94111
(415) 398-0289
Major Market: Computer Manufacturing
Target Industries: OEM
Net Sales: $25 Million — $100 Million (1982)
Contacts:
Head of Marketing: James Blatz
Head of Sales: E. Boswell
Geographic Coverage: International
Year Established: 1977
Number of Employees: 100

MICROPROCESSOR SYSTEMS, INC.
215 Candace Drive
Maitland, FL 32751
(305) 834-2393
Major Markets: Terminal, Computer and Peripheral Manufacturing; OEM Computer Systems
Target Industries: OEM
Target Applications: CP/M, MP/M
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Wendell A. Kaiser
Head of Engineering: Jerry A. Horn
Geographic Coverage: International
Year Established: 1978
Number of Employees: 42

MICRO SOURCE, INC.
595 N. Clayton Road
New Lebanon, OH 45345
(513) 687-1395
Major Markets: OEM Computer Systems, Computer Manufacturing
Target Industries: Industrial, Military
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing/Sales: Wallace Cauper
Head of Software: Wayne Wench
Geographic Coverage: International
Number of Employees: 25

MICRO TECHNOLOGY UNLIMITED
2806 Hillsborough St
P.O. Box 12106
Raleigh, NC 27605
(919) 833-1456
Major Markets: Computer Manufacturing, Software House, OEM Computer Systems
Target Applications: Laboratory, Industrial
Contacts:
Head of Marketing: W.S. Smith
Geographic Coverage: International
Year Established: 1977
Number of Employees: 15

MICRO V CORP.
17791 Sky Park Circle
Irvine, CA 92714
(714) 957-1517
Major Markets: Component and Computer Manufacturing, OEM Computer Systems, Software House
Contacts:
Head of Marketing/Sales: Mark Lewis
Head of Software: Art Shahan
Head of Engineering: Bruce Mann
Geographic Coverage: International
Year Established: 1977

MIDWEST SCIENTIFIC INSTRUMENTS, INC.
220 W. Cedar St
Olathe, KS 66061
(913) 764-3273
Major Markets: Computer and Peripheral Manufacturing, OEM Computer Systems, Maintenance/Other Services, Software House
Net Sales: $1 Million — $5 Million (1981)
Geographic Coverage: National
Year Established: 1970
Number of Employees: 10

MIKROS SYSTEMS CORP.
3626 Quakerbridge Road
Mercerville, NJ 08618
(609) 890-0440
Major Markets: Computer Manufacturing, Maintenance/Other Services
Target Industries: OEM, Industrial, Military
Net Sales: $100,000 — $500,000 (1981)
Contacts:
Head of Sales: Brian Pollard

Head of Software: Harold Herzig
Head of Engineering: Joseph Burns
Geographic Coverage: National
Year Established: 1978
Number of Employees: 15

MINI-COMPUTER SYSTEMS, INC.
399 Fairview Park Drive
Elmsford, NY 10523
(914) 592-8812
Major Markets: Systems House (OEM), Software House, Computer Manufacturing
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Sales: Jim Tomkins
Head of Software: Chris Sanders
Geographic Coverage: National
Year Established: 1969
Number of Employees: 150

MITSUBISHI ELECTRONICS AMERICA, INC.
Computer Division
991 Knox St
Compton, CA 90502
(213) 515-3993
Major Markets: Computer, Terminal and Peripheral Manufacturing; OEM Computer Systems, Software House, Dealer/Distributor; Maintenance/Other Services
Target Industries: Manufacturing; Contractors
Target Applications: Accounting, Data Entry
Net Sales: More than $100 Million (1981)
Geographic Coverage: National
Year Established: 1976
Number of Employees: 100

MODULAR COMPUTER SYSTEMS, INC. (MODCOMP)
1650 W McNab Road
Ft Lauderdale, FL 33310
(305) 974-1380
Major Markets: Computer and Communications Equipment Manufacturing, Maintenance/Other Services
Target Industries: Process Control; Communications, Viewdata, Power Generation
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Marketing: Benjamin Harrison
Head of Engineering: Gabriel Rosica
Head of Customer Service: Jess Barber
Geographic Coverage: International
Year Established: 1970
Number of Employees: 1,500

MODUTEST SYSTEMS, INC.
Suite 11
10632 N 21st Ave
Phoenix, AZ 85029
(602) 944-0365
Major Markets: Computer Manufacturing; OEM Peripherals/Terminals, Dealer/Distributor
Target Industries: Government, Time-Sharing
Target Applications: Real-Time Processing, Goverment Training, T/S
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Lothar Mueller
Head of Engineering: Gene Zeitler
Geographic Coverage: International
Year Established: 1979
Number of Employees: 6

MOHAWK DATA SCIENCES CORP.
7 Century Drive
Parsippany, NJ 07054
(201) 540-9080
Major Markets: Computer, Terminal and Peripheral Manufacturing, Software House
Target Industries: Insurance, Banking, Sports
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Brian S. Gaylord
Geographic Coverage: International
Year Established: 1964
Number of Employees: 5,300

MOLECULAR COMPUTER
251 River Oak Pkwy
San Jose, CA 95134
(408) 262-2122
Major Markets: Computer Manufacturing, OEM Peripherals/Terminals
Target Industries: Business
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing: Alan Davis
Head of Sales: Lawrence Larder
Head of Software: Benjamin Gee
Head of Engineering: Rockland Awalt
Head of Customer Service: Kath Price
Geographic Coverage: International
Year Established: 1981
Number of Employees: 125

MOMENTUM COMPUTER SYSTEMS INTERNATIONAL
965 W. Maude Ave
Sunnyvale, CA 94086
(408) 245-4033
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: Val Skalabrin
Geographic Coverage: International
Year Established: 1978
Number of Employees: 60

MONOLITHIC SYSTEMS CORP.
84 Inverness Circle E.
Englewood, CO 80112
(303) 770-7400
Major Markets: Computer, Component and Peripheral Manufacturing, OEM Peripherals/Terminals, Software House
Net Sales: $1 Million — $5 Million (1981)
Geographic Coverage: International
Year Established: 1970
Number of Employees: 100

MORROW DESIGNS, INC.
5221 Central Ave
Richmond, CA 94804
(415) 524-2101
Major Markets: Component, Computer and Peripheral Manufacturing, Software House; Systems House (OEM)
Contacts:
Head of Marketing: Bob Dilworth
Geographic Coverage: International
Year Established: 1976
Number of Employees: 70

MOSTEK CORP.
1215 W. Crosby Road
Carrollton, TX 75006
(214) 466-6000
Major Markets: Component, Computer and Peripheral Manufacturing, Software House
Target Industries: Manufacturing
Geographic Coverage: International
Year Established: 1970
Number of Employees: 3,800

MULLEN COMPUTER PRODUCTS
2306 American Ave.
P.O. Box 6214
Hayward, CA 94544
(415) 783-2866
Major Markets: Computer and Peripheral Manufacturing, OEM Computer Systems and Peripherals/Terminals, Dealer/Distributor
Target Industries: Manufacturing
Contacts:
Head of Marketing: Marilyn C. Moore
Geographic Coverage: National
Year Established: 1975
Number of Employees: 8

MULTI-TECH SYSTEMS, INC.
82 2nd Ave. S.E.
New Brighton, MN 55112
(612) 631-3550
Major Markets: OEM Computer Systems, Communications Equipment and Computer Manufacturing
Target Industries: Retail
Target Applications: WP, Accounting, Materials Resource Planning, List Management
Contacts:
Head of Marketing: Thomas Heimerman
Geographic Coverage: National
Year Established: 1970
Number of Employees: 50

MUSYS CORP.
1451 Irvine Blvd., No. 11
Tustin, CA 92680
(714) 730-5692
Major Markets: Computer Manufacturing, OEM Computer Systems, Software House, Systems House (OEM), Dealer/Distributor
Target Industries: OEM
Contacts:
Head of Software: Alan Warshaver
Geographic Coverage: International
Year Established: 1980
Number of Employees: 10

MYLEE DIGITAL SCIENCES, INC.
155 Weldon Pkwy
Maryland Heights, MD 63043
(314) 567-3420
Major Markets: Computer Manufacturing, Systems House (OEM)
Target Industries: Plumbing, Heating, Air Conditioning
Target Applications: Inventory Management, POS, Accounting
Contacts:
Head of Marketing: Tom Fisher
Geographic Coverage: National
Year Established: 1967
Number of Employees: 65

NANODATA COMPUTER CORP.
1 Computer Park
Buffalo, NY 14203
(716) 845-5000
Major Market: Computer Manufacturing
Target Industries: Aerospace; Government, Education
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing: Michael Senft
Geographic Coverage: National
Year Established: 1971
Number of Employees: 25

NATIONAL ADVANCED SYSTEMS, INC.
800 E. Middlefield Road
Mountain View, CA 94043
(415) 962-6000
Major Markets: Component and Computer Manufacturing, OEM Peripherals/Terminals, Software House, Maintenance/Other Services
Net Sales: More than $100 Million (1982)
Contacts:
Head of Sales: Jerry Ungermann
Head of Software: Alan Cade
Head of Engineering: C.B. Luce
Head of Customer Service: David Turner
Geographic Coverage: International
Year Established: 1979
Number of Employees: 2,400

NATIONAL MICRO PRODUCTS, INC.
430 Southlake Blvd
Richmond, VA 23236
(804) 794-0517
Major Markets: Computer and Communications Equipment Manufacturing, OEM Computer Systems, Systems House (OEM); Dealer/Distributor; Maintenance/Other Services
Target Industries: Small Business; Lodging; Security
Target Applications: Office Networks, Process Control
Net Sales: $100,000 — $500,000 (1981)
Contacts:
Head of Marketing/Software: Carol Nygent
Geographic Coverage: National
Year Established: 1980
Number of Employees: 20

NCR CORP.

World Headquarters
1700 S. Patterson Blvd.
Dayton, OH 45479
(513) 445-5000
Major Markets: Component, Computer, Terminal, Peripheral, Communications Equipment and Office Equipment Manufacturing; Software House, Systems House (OEM), Data Services; Maintenance/Other Services; Miscellaneous Computer Supplies
Target Industries: Retail, Banking; Commercial/Industrial, Medical, Education, Government
Target Applications: POS, Automatic Teller Machines, General Accounting
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Manuel Garcia
Geographic Coverage: International
Year Established: 1884

NEC INFORMATION SYSTEMS, INC.
5 Militia Drive
Lexington, MA 02173
(617) 862-3120
Major Markets: Software House, Peripheral and Computer Manufacturing
Target Industries: Pharmaceutical, Accounting, Legal, Resorts
Contacts:
Head of Marketing: Harland K Lavigne
Geographic Coverage: International
Year Established: 1977
Number of Employees: 300

NEW ENGLAND DIGITAL CORP.
49 N. Main St.
P.O. Box 546
White River Junction, VT 05001
(802) 295-5800
Major Markets: Computer Manufacturing, OEM Computer Systems
Target Industries: Communications, Music
Contacts:
Head of Marketing: Brad Naples
Head of Software: Jeff Risberg
Geographic Coverage: International
Year Established: 1976
Number of Employees: 35

NIAGARA SCIENTIFIC, INC.
6716 Joy Road
E. Syracuse, NY 13057
(315) 437-0821
Major Markets: Computer Manufacturing, OEM Computer Systems, Systems House (OEM)
Target Industries: Government; Manufacturing
Target Applications: Environment Monitor, Machine Control
Contacts:
Head of Marketing: David Jennings
Geographic Coverage: National
Year Established: 1976
Number of Employees: 50

NICOLET INSTRUMENT CORP.
5225 Verona Road
Madison, WI 53711
(608) 271-3333
Major Markets: Computer Manufacturing, OEM Computer Systems
Target Industries: Scientific; Engineering; Medical
Target Applications: Graphics; Medical Test, Analytical Instrumentation
Geographic Coverage: International
Year Established: 1965
Number of Employees: 1,100

NIXDORF COMPUTER CORP.
300 Third Ave
Waltham, MA 02154
(617) 890-3600
Major Markets: Component, Computer, Terminal, Peripheral and Communications Equipment Manufacturing, Software House, Maintenance/Other Services
Target Industries: Banking, Retail, Transportation, Medical
Target Applications: Accounting; General Business
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Mike Backler
Head of Sales: Robert Davis
Head of Software: Philip Colquhoun
Geographic Coverage: International
Year Established: 1952
Number of Employees: 1,800

NNC ELECTRONICS
15631 Computer Lane
Huntington Beach, CA 92649
(714) 895-8000
Major Market: Computer Manufacturing
Target Industries: Government; OEM
Net Sales: $1 Million — $5 Million (1982)
Geographic Coverage: International
Year Established: 1979
Number of Employees: 20

NON LINEAR SYSTEMS INC.
533 Stevens Ave
Delmar, CA 92104
(714) 755-1134
Major Markets: Computer and Communications Equipment Manufacturing
Contacts:
Head of Marketing: David Kay
Geographic Coverage: International
Year Established: 1952
Number of Employees: 160

NORDEN SYSTEMS
Norden Place
P.O. Box 5300
Norwalk, CT 06856
(203) 852-4908
Major Markets: Component, Computer and Peripheral Manufacturing, OEM Computer Systems, Systems House (OEM), Maintenance/Other Services
Target Industries: Military
Target Applications: Military; Severe Environment
Contacts:
Head of Marketing: William W Kingston
Head of Engineering: Leo Botwin
Geographic Coverage: International
Year Established: 1928
Number of Employees: 6,000

NORSK DATA NORTH AMERICAN, INC.
55 William St
Wellesley, MA 02181
(617) 237-7945
Major Markets: Computer Manufacturing; OEM Computer Systems, Dealer/Distributor
Target Industries: Government
Geographic Coverage: International
Year Established: 1967
Number of Employees: 1,000

NORTHERN TELECOM, INC.
Electronic Office Systems Division
Data Park
P.O. Box 1222
Minneapolis, MN 55440
(612) 932-8000
Major Markets: Computer, Terminal, Peripheral, Communications Equipment and Office Equipment Manufacturing, Software House, Maintenance/Other Services
Target Industries: Manufacturing, Banking, Government, Education
Target Applications: Inquiry/Response, Data Entry, Distributed Data, Remote Job Entry
Contacts:
Head of Marketing: R W Duthie
Head of Sales: S T Oppenheimer
Head of Customer Service: J Vaughn
Geographic Coverage: International

NORTHSTAR COMPUTERS, INC.
14440 Catalina St
San Leandro, CA 94577
(415) 357-8500
Major Market: Computer Manufacturing
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Gail James
Head of Sales: Rhine Meyering
Head of Software: Dick Williamson
Head of Engineering: Dr. Mark Greenberg
Head of Customer Service: Donald Watson
Geographic Coverage: International
Year Established: 1976
Number of Employees: 330

NOVELL DATA MANAGEMENT, INC.
1170 N. Industrial Park Drive
Orem, UT 84057
(801) 226-8202
Major Markets: Component, Computer and Peripheral Manufacturing
Contacts:
Head of Marketing: Reid Clark
Head of Sales: David Bumgardner
Geographic Coverage: International
Year Established: 1981
Number of Employees: 40

NUCLEAR DATA, INC.
Golf and Meacham Roads
Schaumburg, IL 60196
(312) 884-3600
Major Markets: Computer Manufacturing, OEM Computer Systems, Software House
Target Industries: Nuclear
Target Applications: Radiation Detection
Contacts:
Head of Marketing: Charles Long
Head of Software: Raymond C. Master
Head of Engineering: Gerald W Gaughran
Geographic Coverage: International
Year Established: 1956
Number of Employees: 200

OAKLEAF, INC.
19737 Nordhoff Place
P.O. Box 44230
Chatsworth, CA 91311
(218) 993-1223
Major Markets: Component, Computer, Terminal and Peripheral Manufacturing, OEM Computer Systems, Dealer/Distributor
Target Industries: Banking, Office Automation
Contacts:
Head of Marketing: Don Jackson
Geographic Coverage: International
Year Established: 1974
Number of Employees: 300

OBSERVATIONAL SYSTEMS, INC.
1103 Grand Ave
Seattle, WA 98122
(206) 329-3754
Major Market: Computer Manufacturing
Target Industries: Engineering; Manufacturing; Research
Geographic Coverage: International
Year Established: 1976
Number of Employees: 6

OCTAGON COMPUTER SYSTEMS
151 Burnell Ave
San Jose, CA 95119
(408) 225-2700
Major Market: Computer Manufacturing
Target Industries: General Purpose
Target Applications: General Purpose
Contacts:
Head of Software: Charles Goodman
Head of Engineering: Joel Walz
Geographic Coverage: International
Year Established: 1982
Number of Employees: 10

OLYMPIA U.S.A., INC.
Rt. 22
P.O. Box 22
Somerville, NJ 08876
(201) 722-7000
Major Markets: Office Equipment and Computer Manufacturing, OEM Peripherals/Terminals
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Sales: Carl Robbins
Geographic Coverage: National
Year Established: 1940
Number of Employees: 260

OMNIDATA
5717 Corsa Ave
Westlake Village, CA 91362
(213) 991-5810
Major Markets: Computer and Office Equipment Manufacturing
Target Industries: OA
Contacts:
Head of Marketing: George Greenspon
Geographic Coverage: National
Year Established: 1978
Number of Employees: 100

ONYX SYSTEMS, INC.
25 E. Trimble Road
San Jose, CA 95131
(408) 946-6330
Major Market: Computer Manufacturing
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing: Tom Anthony
Head of Sales: Mike Spies
Geographic Coverage: International
Year Established: 1979
Number of Employees: 120

OSBORNE COMPUTER CORP.
25600 Corporate Ave
Hayward, CA 94046
Major Market: Computer Manufacturing
Target Industries: Personal Business Computer
Contacts:
Head of Marketing/Sales: Georgette Psaris
Head of Software: Shelborne Fung
Head of Engineering: Ed Richter
Head of Customer Service: Annette Truesdell
Geographic Coverage: International
Year Established: 1981
Number of Employees: 400

Vendors

OSM COMPUTER CORP.
665 Clyde Ave
Mountain View, CA 94043
(415) 961-8680
Major Market: Computer Manufacturing
Geographic Coverage: International
Year Established: 1980
Number of Employees: 70

OTRONA CORP.
4755 Walnut St
Boulder, CO 80301
(303) 444-8100
Major Market: Computer Manufacturing
Target Industries: Engineering, Insurance, Scientific, Field Testing
Contacts:
Head of Marketing: David B. Ridge
Head of Sales: R. Gary Mesch
Head of Software: Evan M. Scharf
Head of Engineering: Ronald R. Lingemann
Head of Customer Service: T. Kim Blakeslee
Geographic Coverage: International
Year Established: 1975
Number of Employees: 80

OXBRIDGE, INC.
545 Weddell Drive
Sunnyvale, CA 94086
(408) 734-2400
Major Market: Computer and Communications Equipment Manufacturing
Target Industries: Medical
Geographic Coverage: National
Year Established: 1972
Number of Employees: 85

PANASONIC INDUSTRIAL CO.
Matsushita Electronic Corp. of America
1 Panasonic Way
Secaucus, NJ 07094
(201) 348-7000
Major Markets: Component, Computer, Office Equipment and Communications Equipment Manufacturing, OEM Peripherals/Terminals and Computer Systems.
Target Industries: Banking, Manufacturing, Retail
Target Applications: Data Entry
Contacts:
Head of Marketing: Scott Minakami
Head of Sales: Joe Shohtoku
Geographic Coverage: International
Year Established: 1982
Number of Employees: 600

PARADYNE CORP.
8550 Ulmerton Road
P.O. Box 2826
Largo, FL 33540
(813) 530-2000
Major Markets: Computer, Terminal and Communications Equipment Manufacturing, OEM Peripherals/Terminals and Computer Systems, Maintenance/Other Services
Target Industries: Banking, Engineering, Manufacturing, Retail
Target Applications: WP, OA, Data Entry, DBMS
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Jerry T. Kendall
Head of Sales: Peter L. Vosotas
Head of Software: Bob Shea
Head of Engineering: John D. Applegate
Head of Customer Service: Bernie Pysz
Geographic Coverage: International
Year Established: 1969
Number of Employees: 3,100

PARALLEL COMPUTERS, INC.
1202 Shaffer Road
Santa Cruz, Ca. 95060
(408)-429-1338
Major Markets: Computer and Peripheral Manufacturing, OEM Peripherals/Terminals, Software House
Target Industries: Engineering, Banking, Retail, Manufacturing
Contacts:
Head of Marketing/Sales: Scott Pine
Head of Engineering: Mark Pine
Year Established: 1980
Number of Employees: 18

PASCO INTERNATIONAL, INC.
380 N. Midland Ave
Saddle Brook, NJ 07662
(201) 791-6300
Major Markets: Computer Manufacturing, OEM Peripherals/Terminals and Computer Systems, Systems House (OEM)
Target Industries: Securities Trade, DP
Target Applications: Access Control, Alarm Monitoring, Time and Attendance, Traffic Control
Contacts:
Head of Marketing: Thomas Few
Head of Sales: Joseph Wilkens
Head of Engineering: Thomas Sloane
Head of Customer Service: Susan Cerbo
Geographic Coverage: International
Year Established: 1957
Number of Employees: 35

PCE SYSTEMS
4219 S. Market Court
Unit H
Sacramento, CA 95834
(916) 921-5454
Major Markets: Component and Computer Manufacturing, OEM Computer Systems, Software House
Target Industries: Engineering, Financial
Target Applications: Office Communications
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing: Dave Alling
Geographic Coverage: International
Year Established: 1977
Number of Employees: 20

PDS TECHNOLOGIES, INC.
2000 Blackrock Tnpk
Fairfield, CT 06430
(203) 366-4089
Major Markets: Component, Computer, Terminal and Peripheral Manufacturing, OEM Computer Systems, Software House
Geographic Coverage: National
Year Established: 1982
Number of Employees: 50

PEGASUS DATA SYSTEMS
238 Lackland Drive
Middlesex, NJ 08846
(201) 356-9200
Major Markets: Peripheral and Computer Manufacturing
Geographic Coverage: International
Year Established: 1976
Number of Employees: 50

PENTEL OF AMERICA, LTD.
2715 Columbia St
Torrance, CA 90503
(213) 320-3831
Major Markets: Computer and Peripheral Manufacturing
Target Industries: Commercial
Contacts:
Head of Marketing/Sales: M. Osada
Head of Software: Y. Shimoeda
Head of Engineering: T. Ozeki
Head of Customer Service: T. Nakayama
Geographic Coverage: International
Year Established: 1965
Number of Employees: 300

PERIPHONICS CORP.
4000 Veterans Memorial Highway
Bohemia, NY 11716
(516) 467-0500
Major Markets: Computer Peripheral and Communications Equipment Manufacturing, OEM Computer Systems
Target Industries: Banking, Retail, Oil
Target Applications: Voice Entry
Contacts:
Head of Marketing: A.D. Fleener
Geographic Coverage: International
Year Established: 1969
Number of Employees: 250

PERKIN-ELMER CORP.
Data Systems Group
2 Crescent Place
Oceanport, NJ 07757
(201) 870-4712
Major Market: Computer Manufacturing
Target Industries: Financial, Scientific, Geophysical, Aerospace and Weapons
Target Applications: CAD/CAM, Simulation
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: B. Rosenbaum
Head of Sales: James K. Sims
Head of Software/Engineering: David I. Caplan
Head of Customer Service: Joseph Rechner
Geographic Coverage: International
Year Established: 1966
Number of Employees: 2,000

PERSONAL MICRO COMPUTERS, INC.
475 Ellis St
Mountain View, CA 94043
(415) 962-0220
Major Markets: Computer Peripheral and Office Equipment Manufacturing, Software House, Miscellaneous Computer Supplies
Contacts:
Head of Marketing: Ron Troxell
Geographic Coverage: International
Year Established: 1980

PERTEC COMPUTER CORP.
Data Systems
17112 Armstrong Ave
Irvine, CA 92714
(714) 540-8340
Major Markets: Computer and Terminal Manufacturing, Software House, Dealer/Distributor, Maintenance/Other Services
Target Industries: OEM
Contacts:
Head of Marketing: Roberto Maldono
Head of Sales: Lawrence Ciuffitelli
Geographic Coverage: International
Year Established: 1967
Number of Employees: 500

PHAZE INFORMATION MACHINES CORP.
7650 E. Redfield
Scottsdale, AZ 85260
(602) 991-6855
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: Robert Goerner
Geographic Coverage: International
Year Established: 1982
Number of Employees: 33

PHC, INC.
22 Melfy Drive
P.O. Box 1109
Ann Arbor, MI 48106
(313) 994-0501
Major Markets: Computer and Component Manufacturing, Software House, OEM Computer Systems, Maintenance/Other Services
Target Applications: Process Control
Net Sales: $100,000 — $500,000 (1982)
Geographic Coverage: National
Year Established: 1971
Number of Employees: 6

PHOENIX DIGITAL CORP.
2315 N. 35th Ave
Phoenix, AZ 85009
(602) 278-3591
Major Markets: Computer Terminal and Communications Equipment Manufacturing, OEM Computer Systems, Maintenance/Other Services
Target Industries: Automotive
Target Applications: Data Acquisition, Process Control
Contacts:
Head of Marketing: Gerald Trussell
Geographic Coverage: International
Year Established: 1975
Number of Employees: 50

PHOENIX MICROSYSTEMS, INC.
2014 Bob Wallace Ave
Huntsville, AL 35805
(205) 536-2826
Major Markets: OEM Computer Systems, Computer Manufacturing, Software House, Systems House (OEM)
Target Industries: Telecommunications
Target Applications: Testing
Contacts:
Head of Marketing: Mel Mayo
Head of Engineering: Mark Hoffman
Geographic Coverage:
Year Established: 1977
Number of Employees: 14

PLESSEY PERIPHERAL SYSTEMS
17466 Daimler Ave
Irvine, CA 92714
(714) 540-9945
Major Markets: OEM Computer Systems, Computer Manufacturing, Software House, Systems House (OEM)

Contacts:
Head of Marketing: Daniel H. Reese
Head of Sales: Gerard Mottier
Head of Software: Randy Hardy
Geographic Coverage: International
Number of Employees: 45

PLEXUS COMPUTERS, INC.
2230 Martin Ave
Santa Clara, CA 95050
(408) 988-1755
Major Markets: Computer Manufacturing, OEM Computer Systems
Target Industries: OEM, Commercial, OA
Target Applications: OA
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Sales: Ralph Mela
Geographic Coverage: International
Year Established: 1980
Number of Employees: 75

POINT FOUR DATA CORP.
2569 McCabe Way
Irvine, CA 92714
(714) 754-4114
Major Markets: Computer Manufacturing, Dealer/Distributor; Software House
Target Industries: OEM, Systems Houses, General Business
Target Applications: Project Management; Code Generation
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Marketing: Robin Olivier
Geographic Coverage: International
Year Established: 1969
Number of Employees: 200

POLARIS MICROCOMPUTERS, INC.
7272 Hayvenhurst Road
Van Nuys, CA 91406
(213) 989-5111
Major Markets: OEM Computer Systems, Computer Manufacturing
Target Industries: Retail, Pharmaceutical
Contacts:
Head of Sales: Dave Tanzman
Geographic Coverage: National
Year Established: 1976
Number of Employees: 30

POLYMORPHIC SYSTEMS
5730 Thornwood Drive
Santa Barbara, CA 93117
(805) 967-0466
Major Market: Computer Manufacturing
Target Industries: Small Business
Target Applications: Accounting
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing/Sales: Ken Gudis
Head of Software: Lenny Araki
Head of Engineering: Mark Macklin
Head of Customer Service: Jeannette Lawson
Geographic Coverage: International
Year Established: 1975
Number of Employees: 65

PRIME COMPUTER, INC.
Prime Park
Natick, MA 01760
(617) 655-8000
Major Markets: Component, Computer, Terminal, Peripheral and Communications Equipment Manufacturing, OEM Peripherals/Terminals, Software House, Maintenance/Other Services
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Robert G Claussen
Head of Software: Edward J Christiansen
Head of Engineering: Roland D. Pamper
Geographic Coverage: International
Year Established: 1972
Number of Employees: 5,000

PRODIGY SYSTEMS, INC.
497 Lincoln Highway
Iselin, NJ 08830
(201) 283-2000
Major Markets: Software House, Systems House (OEM), Dealer/Distributor; Computer Manufacturing
Contacts:
Head of Marketing: Eri Golembo
Geographic Coverage: Regional
Year Established: 1976
Number of Employees: 50

PRODUCT ASSOCIATES, INC.
465 Convention Way
Redwood City, CA 94063
(415) 364-3121
Major Markets: Computer and Communications Equipment Manufacturing, OEM Computer Systems
Target Industries: Education, Government, Medical, Scientific
Target Applications: Education, Office
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing: Joseph DePalo
Head of Engineering: Robert McGowan
Head of Customer Service: Lauranne Dayton
Geographic Coverage: International
Year Established: 1976
Number of Employees: 10

PROLINK CORP.
5757 Central Ave
Boulder, CO 80301
(303) 447-2800
Major Markets: Computer Manufacturing, OEM Computer Systems
Contacts:
Head of Marketing: Bardwell Salmon
Head of Sales: William T. Treadwell
Head of Software: Suresh C. Bazaj
Head of Engineering: Michael M Malmer
Geographic Coverage: International
Year Established: 1980
Number of Employees: 92

PRO-LOG CORP.
2411 Garden Road
Monterey, CA 93940
(400) 372-4593
Major Markets: Component and Computer Manufacturing, Software House
Target Industries: OEM, Engineering
Target Applications: Industrial Control
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Sales: Murray MacDonald
Head of Software: Dale Christensen
Head of Engineering: Helene MacDonald
Geographic Coverage: International
Year Established: 1972
Number of Employees: 210

PRONTO COMPUTERS, INC.
3170 Koshiwa St
Torrance, CA 90505
(213) 539-6400
Major Markets: Computer Manufacturing, Software House
Target Industries: Retail, Systems Integrator
Contacts:
Head of Marketing/Sales: Gary Bennett
Head of Engineering: Skip Hanson
Geographic Coverage: National
Year Established: 1982
Number of Employees: 25

PROPHET 21
2 E. Broad St
Hopewell, NJ 08525
(609) 466-2100
Major Markets: Computer Manufacturing, OEM Computer Systems
Target Industries: Industrial Distribution, Automobile, Steel, Electrical Distribution
Target Applications: Data Entry
Contacts:
Head of Marketing: Ralph Beauregard
Head of Software: Neil Jafe
Head of Engineering: Tom Castanya
Geographic Coverage: International
Year Established: 1969
Number of Employees: 45

PSITECH
2842C Walnut Ave
Tustin, CA 92680
(714) 730-0981
Major Markets: Computer and Terminal Manufacturing, Maintenance/Other Services
Target Industries: Banking, Office, Oil
Target Applications: Graphics
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing/Sales: Herbert B Berkwits
Head of Engineering: Paul Gosselin
Head of Customer Service: Steve Dulson
Geographic Coverage: National
Year Established: 1979
Number of Employees: 20

PYRAMID TECHNOLOGY CORP.
1295 Charleston Road
Mountain View, CA 94043
(415) 494-2700
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: Frank Madren
Head of Software: Bill Gimple
Head of Engineering: Fred Ordemian
Geographic Coverage: National
Year Established: 1981
Number of Employees: 50

QANTEL CORP.
4142 Point Eden Way
Hayward, CA 94545
(415) 887-7777
Major Markets: Component, Computer, Terminal and Peripheral Manufacturing, OEM Peripherals/Terminals and Computer Systems, Software House, Maintenance/Other Services, Systems House (OEM)
Target Industries: Manufacturing; Transportation, Lodging, Retail
Contacts:
Head of Marketing: Mike McCorry
Head of Sales: John Moeller
Head of Software: Troy Lemons
Head of Engineering: Lou Poumakis
Geographic Coverage: International
Year Established: 1969
Number of Employees: 600

QDP COMPUTER SYSTEMS, INC.
10330 Brecksville Road
Brecksville, OH 44141
(216) 526-0838
Major Markets: Computer Manufacturing, OEM Computer Systems
Target Industries: OEM, General Business
Target Applications: Accounting, Medical, Order Entry, Inventory
Contacts:
Head of Marketing: Ken Parich
Head of Software: Gary Keefe
Head of Engineering: David Kelly
Geographic Coverage: International
Year Established: 1979
Number of Employees: 19

QEI, INC.
60 Fadem Road
Springfield, NJ 07081
(201) 379-7400
Major Markets: Component and Computer Manufacturing, OEM Computer Systems, Dealer/Distributor, Software House, Maintenance/Other Services
Target Industries: Electric Power; Oil and Gas, Water Control
Target Applications: Supervisory Control and Data Acquisition
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: William Stanger
Geographic Coverage: International
Year Established: 1974
Number of Employees: 150

Q1 CORP.
125 Ricefield Lane
Hauppage, NY 11787
(516) 543-7800
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: Richard Van Brunt
Geographic Coverage: International
Year Established: 1971
Number of Employees: 20

QUASAR CO.
9401 W. Grand Ave
Franklin Park, IL 60131
Major Markets: Dealer/Distributor; Computer Manufacturing
Target Industries: Systems House, OEM, Computer Store
Contacts:
Head of Marketing: Todd Umeda
Geographic Coverage: International
Year Established: 1975
Number of Employees: 800

Vendors

QUAY CORP.
22 Meridian Place
P.O. Box 783
Eatontown, NJ 07724
(201) 542-7340
Major Market: Computer Manufacturing
Geographic Coverage: International
Year Established: 1977
Number of Employees: 21

QUEST ELECTRONICS
2322 Walsh Ave
Santa Clara, CA 95051
(408) 988-1640
Major Markets: Computer Manufacturing; Dealer/Distributor
Net Sales: $1 Million — $5 Million (1982)
Geographic Coverage: National
Year Established: 1976
Number of Employees: 12

RADIAN CORP.
P.O. Box 9948
Austin, TX 78766
(512) 454-4797
Major Markets: Component and Computer Manufacturing, OEM Computer Systems, Software House, Dealer/Distributor Maintenance/Other Services
Target Industries: Energy
Contacts:
Head of Marketing: F. Scott Lagrone
Head of Sales: Ted Hudson
Geographic Coverage: International
Year Established: 1968
Number of Employees: 650

RADIX CORP.
321 Lawndale Drive
Salt Lake, UT 84115
(801) 487-4141
Major Markets: Computer Manufacturing, Software House, Systems House (OEM)
Target Industries: Banking
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: James E. Bagley
Geographic Coverage: National
Year Established: 1969
Number of Employees: 50

RAIR MICROCOMPUTER CORP.
4101 Burton Drive
Santa Clara, CA 95050
(408) 988-1790
Major Market: Computer Manufacturing
Net Sales: $5 Million — $25 Million (1981)
Geographic Coverage: International
Year Established: 1975
Number of Employees: 64

RAMTEK CORP.
2211 Lawson Lane
Santa Clara, CA 95050
(408) 988-2211
Major Markets: Computer and Terminal Manufacturing
Target Industries: Medical, Aerospace, Scientific, Business
Contacts:
Head of Marketing: Peter W. Cassidy
Geographic Coverage: International
Year Established: 1971
Number of Employees: 450

RASTER GRAPHICS, INC.
P.O. Box 23334
Tigard, OR 97223
(503) 620-2241
Major Markets: Computer Manufacturing; OEM Computer Systems
Target Industries: Engineering, Medical, Manufacturing
Contacts:
Head of Marketing: W. Smith
Head of Engineering: David Johnson
Geographic Coverage: International
Year Established: 1978
Number of Employees: 10

RAYTHEON CO.
Data Systems Division
1415 Boston-Providence Tnpk
Norwood, MA 02062
(617) 762-6700
Major Markets: Component, Peripheral, Communications Equipment, Office Equipment and Computer Manufacturing
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: James Warren
Geographic Coverage: International
Year Established: 1960
Number of Employees: 7,000

RECOGNITION EQUIPMENT, INC.
P.O. Box 222307
Irving, TX 75222
(214) 579-6000
Major Markets: OEM Peripherals/Terminals and Computer Systems, Computer Manufacturing
Target Industries: Banking, Petroleum, Insurance; Utilities
Target Applications: OCR, Documentation Processing
Net Sales: More than $100 Million (1982)
Contacts:
Head of Marketing: Robert G. Reedy
Head of Engineering: Israel Shenberg
Geographic Coverage: International
Year Established: 1961
Number of Employees: 2,000

REXON BUSINESS MACHINES CORP.
5800 Uplander Way
Culver City, CA 90230
(213) 641-7110
Major Markets: Computer Manufacturing, Systems House (OEM)
Target Industries: Manufacturing, Health; General Business
Target Applications: WP; DBMS, General Business
Contacts:
Head of Marketing/Sales: Don Sullivan
Head of Software/Engineering: Bil Ang
Geographic Coverage: International
Year Established: 1978
Number of Employees: 125

REYNOLDS & REYNOLDS CO.
600 Germantown St
P.O. Box 1005
Dayton, OH 45401
(513) 443-2000
Major Markets: Software House; Systems House (OEM), Miscellaneous Computer Supplies, Computer Manufacturing
Target Industries: Automobile Medical; Contracting
Target Applications: Accounting
Net Sales: More than $100 Million (1981)
Contacts:
Head of Engineering: Harry Nicholson
Geographic Coverage: National
Year Established: 1866
Number of Employees: 2,500

RIDGE COMPUTERE
586 Weddell Drive
Sunnyvale, CA 94086
(408) 745-0400
Major Market: Computer Manufacturing
Target Industries: Engineering; Scientific
Target Applications: CAD; Graphics, Engineering Computation
Contacts:
Head of Marketing: Renay Dara-Abrams
Head of Sales: William Shellooe
Head of Software: Edwin Basart
Head of Engineering: Hugh Martin
Geographic Coverage: Regional
Year Established: 1980
Number of Employees: 22

RJE OF AMERICA, INC.
2545 W. County Road C
St. Paul, MN 55113
(612) 639-5900
Major Markets: OEM Computer Systems, Computer Manufacturing
Target Industries: OEM
Target Applications: WP; Accounting, Program Generation
Contacts:
Head of Marketing/Sales: David Kreager
Head of Engineering: John Smoot
Geographic Coverage: National
Year Established: 1974
Number of Employees: 60

SAGE COMPUTER TECHNOLOGY
195 N. Edson Way
Suite 14
Reno, NV 89502
(702) 322-6866
Major Market: Computer Manufacturing
Contacts:
Head of Software: Bill Bonham
Head of Engineering: Wilbur Harvey
Geographic Coverage: National
Year Established: 1982
Number of Employees: 12

SANYO BUSINESS SYSTEMS CORP.
51 Joseph St
Moonachie, NJ 07074
(201) 440-9300
Major Markets: Computer, Terminal, Peripheral and Office Equipment Manufacturing; OEM Peripherals/Terminals, Software House
Contacts:
Head of Marketing: N. Yamashita
Head of Sales: Arthur Shebar
Head of Customer Service: Mike Zajak
Geographic Coverage: International

SCENIC COMPUTER SYSTEM CORP.
14852 N.E. 31st Circle
Redmonds, WA 98052
(306) 885-5500
Major Markets: Computer Manufacturing, Software House
Contacts:
Head of Marketing: Wayne Paulson
Geographic Coverage: International
Year Established: 1981
Number of Employees: 10

SCIENTIFIC DATA SYSTEMS, INC.
344 Main St
Venice, CA 90291
(213) 390-8673
Major Markets: Computer Manufacturing, Software House
Target Industries: Legal, Medical; Accountants, Trash Collection
Target Applications: WP, Legal Time and Billing, Temporary Help
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Software: William Scheding
Head of Engineering: Jack M. Mitchell
Geographic Coverage: National
Year Established: 1977
Number of Employees: 50

SCIENTIFIC MICRO SYSTEMS, INC.
777 E. Middlefield Road
Mountain View, CA 94043
(415) 964-5700
Major Markets: Computer and Peripheral Manufacturing, OEM Computer Systems, Systems House (OEM), Software House
Target Industries: OEM, Scientific
Target Applications: Industrial Control, Small Business
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Michael A. Liccardo
Geographic Coverage: International
Year Established: 1970
Number of Employees: 175

SCI SYSTEME, INC.
5000 Technology Drive
P.O. Box 1000
Huntsville, AL 35807
(205) 882-4800
Major Markets: Component, Computer and Terminal Manufacturing, OEM Computer Systems, Systems House (OEM)

SEAL & COMPANY, INC.
1246 Tayor St. N.W.
Washington, DC 20011
(202) 882-4800
Major Markets: OEM Computer Systems; Software House, Maintenance/Other Services, Computer Manufacturing
Target Industries: Process Control, Energy; Industrial
Target Applications: Energy; Industrial
Contacts:
Head of Engineering: Bill Stein
Geographic Coverage: Regional
Year Established: 1923
Number of Employees: 60

SEATTLE COMPUTER PRODUCTS
1114 Industry Drive
Seattle, WA 98188
(206) 575-1830
Major Market: Computer Manufacturing
Target Applications: WP

Geographic Coverage: International
Year Established: 1977
Number of Employees: 36

SECOND SOURCE COMPUTERS, INC.
14712 Bentley Circle
Tustin, CA 92680
(714) 832-7724
Major Market: Computer Manufacturing
Target Industries: Scientific
Contacts:
Head of Marketing: John McNutt
Geographic Coverage: International
Year Established: 1975
Number of Employees: 40

SEEQUA COMPUTER CORP.
209 West St
Annapolis, MD 21401
(301) 268-6650
Major Market: Computer Manufacturing
Contacts:
Head of Marketing: James Hoffman
Year Established: 1979

SENTINEL COMPUTER CORP.
9902 Carver Road
Cincinnati, OH 45242
(513) 984-6822
Major Markets: Computer and Terminal Manufacturing, Software House, Systems House (OEM)
Target Industries: Distribution; Wholesale
Target Applications: Accounting
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Leland Cole
Head of Sales: John W. Peters
Head of Engineering: Vernon J. Schryver
Geographic Coverage: International
Year Established: 1978
Number of Employees: 45

SENTINEL ENERGY CONTROL SYSTEMS, INC.
30 B Street
Burlington, MA 01803
(617) 273-1778
Major Markets: OEM Computer Systems, Software House, Computer Manufacturing
Target Industries: Manufacturing; Motel, Nursing Home
Target Applications: Energy Management
Geographic Coverage: National
Year Established: 1976
Number of Employees: 12

SHARP ELECTRONICS CORP.
Systems Division
10 Sharp Plaza
Paramus, NJ 07652
(201) 265-5600
Major Markets: Dealer/Distributor; Computer Manufacturing
Contacts:
Head of Marketing: Breland Holly
Geographic Coverage: International
Year Established: 1980
Number of Employees: 500

SIETHORP SYSTEMS, INC.
800 Cox Ave
Erlanger, KY 41018
(606) 525-1300
Major Markets: Component and Computer Manufacturing, OEM Peripherals/Terminals and Computer Systems; Systems House (OEM)
Target Industries: Manufacturing, Warehouse, Process Control
Target Applications: Factory Administration, Materials Handling, Data Acquisition, Process Monitoring
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing/Sales: Jeffrey Hanna
Head of Software/Engineering: Chuck E. Baldwin
Geographic Coverage: National
Year Established: 1975
Number of Employees: 25

SIERRA NATIONAL CORP.
5037 Ruffner St
San Diego, CA 92111
(714) 277-4810
Major Markets: Computer Manufacturing, Software House, Systems House (OEM), Data Services
Target Industries: Accounting, Energy
Target Applications: Energy Control, POS, Accounting
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing/Sales: David Forbes
Head of Software: Dennis Wilson
Head of Engineering: James Limb
Geographic Coverage: International
Year Established: 1969
Number of Employees: 40

SMOKE SIGNAL BROADCASTING
31336 Via Colinas St
Westlake Village, CA 91362
(213) 889-9340
Major Markets: Computer Manufacturing, Systems House (OEM)
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing/Sales: Jim Allday
Head of Engineering: Ken Erickson
Geographic Coverage: International
Year Established: 1976
Number of Employees: 20

SONY COMMUNICATIONS PRODUCTS CO.
Microcomputer Division
1 Sony Drive
Park Ridge, NJ 07656
(201) 930-1000
Major Markets: Computer Terminal and Peripheral Manufacturing
Geographic Coverage: National
Year Established: 1981

SOUTHERN COMPUTER SYSTEMS, INC.
2304 12th Ave N
P.O. Box 3373A
Birmingham, AL 35234
(205) 933-1659
Major Markets: Software House, OEM Computer Systems, Data Services, Dealer/Distributor; Computer Manufacturing, Maintenance/Other Services
Target Applications: Data Entry
Net Sales: $500,000 — $1 Million (1981)
Contacts:
Head of Marketing/Sales: Paul Scalise
Head of Software: Mark Sumner
Geographic Coverage: International
Year Established: 1979
Number of Employees: 7

SOUTHWEST TECHNICAL PRODUCTS, INC.
219 W. Rhapsody
San Antonio, TX 78216
(512) 344-0241
Major Market: Computer Manufacturing
Target Industries: Dealer
Contacts:
Head of Marketing: Fred Fuchs
Geographic Coverage: International
Year Established: 1965
Number of Employees: 100

SPECTRA SYSTEMS, INC.
Suite A-4
3841 Old Conejo Road
Newbury Park, CA 91320
(805) 499-4324
Major Markets: Computer and Terminal Manufacturing, OEM Computer Systems, Systems House (OEM)
Net Sales: $500,000 — $1 Million (1981)
Contacts:
Head of Marketing/Sales: Al Coulter
Geographic Coverage: International
Year Established: 1978
Number of Employees: 55

SPERRY CORP.
Sperry Univac Division
Township Line & Union Meeting Road
P.O. Box 500
Blue Bell, PA 19424
(215) 542-4011
Major Markets: Component, Computer, Terminal, Peripheral and Communications Equipment Manufacturing, OEM Computer Systems, Software House, Maintenance/Other Services
Target Industries: Manufacturing, Public Sector, Distribution, Airline
Net Sales: $100,000 — $500,000 (1981)
Contacts:
Head of Marketing: Joseph Casullo
Geographic Coverage: International
Year Established: 1962
Number of Employees: 48,000

STEARN COMPUTER SYSTEMS
3501 Raleigh Ave S
Minneapolis, MN 5541E
(612) 929-4400
Major Markets: Computer Manufacturing; Maintenance/Other Services
Target Industries: Fortune 1000, Small Business
Contacts:
Head of Marketing/Sales: Bob Gallegher
Head of Engineering: John Chinas
Head of Customer Service: Kathy Forde
Geographic Coverage: International
Year Established: 1982
Number of Employees: 50

STRATUS COMPUTER, INC.
17 Strathmore Road
Natick, MA 01760
(617) 653-1466
Major Markets: Computer Manufacturing, OEM Peripherals/Terminals, Software House
Target Applications: Transaction Processing
Contacts:
Head of Marketing/Sales: John Morgridge
Head of Software: Bob Freiburghouse
Head of Engineering: Gardner Hendrie
Head of Customer Service: Jim Schroeder
Geographic Coverage: International
Year Established: 1980
Number of Employees: 110

SUN MICROSYSTEMS, INC.
2310 Walsh Ave
Santa Clara, CA 95051
(408) 748-9900
Major Markets: Computer Manufacturing, OEM Computer Systems
Target Industries: OEM, Scientific, Engineering
Target Applications: CAD, Graphics
Contacts:
Head of Marketing: Ajay Pun
Head of Software: William Joy
Head of Engineering: Andreas Bechtolsheim
Head of Customer Service: John Gage
Geographic Coverage: International
Year Established: 1982
Number of Employees: 40

SUPERSET, INC.
11035 Roselle St
San Diego, CA 92121
(714) 452-8665
Major Market: Computer Manufacturing
Contacts:
Head of Marketing/Sales: Jerry Donaldson
Head of Engineering: James Hunter
Geographic Coverage: International
Year Established: 1979
Number of Employees: 19

SYNAPSE COMPUTER CORP.
801 Buckeye Court
Milpitas, CA 95035
(408) 946-3191
Major Markets: Computer Manufacturing, Software House; Maintenance/Other Services
Target Industries: Banking, Library Services
Target Applications: Transaction Processing
Contacts:
Head of Sales: Stanton Joseph
Head of Software/Engineering: Elliot Nestle
Head of Customer Service: Jay Denny
Year Established: 1980
Number of Employees: 60

SYSCOM INTERNATIONAL
Suite 222
2712 Middleburg Drive
Columbia, SC 29204
(803) 256-6253
Major Market: Computer Manufacturing
Geographic Coverage: International
Year Established: 1980
Number of Employees: 10

Vendors

SYSCON INTERNATIONAL, INC.
1108 South High St
South Bend, IN 46618
(219) 287-5916
Major Market: Computer Manufacturing
Target Industries: Steel, Magnet Wire
Target Applications: Oxygen Analysis
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Sales: Peter Van Dae
Head of Engineering: Townsend Thomas
Head of Customer Service: Ted Dylewski
Geographic Coverage: International
Year Established: 1970
Number of Employees: 30

SYSTEMS GROUP
1601 Orangewood Ave
Orange, CA 92668
(714) 633-4460
Major Markets: Computer Manufacturing, OEM Computer Systems, Software House, Maintenance/Other Services
Net Sales: $5 Million — $25 Million (1982)
Contacts:
Head of Marketing: Dave Jenoss
Head of Engineering: Lowell Dunn
Geographic Coverage: International
Year Established: 1978
Number of Employees: 50

TAB PRODUCTS CO.
Electronic Office Product Division
1451 California Ave
Palo Alto, CA 94304
(415) 858-2500
Major Markets: Terminal, Computer, Office Equipment, Peripheral and Communications Equipment Manufacturing, Miscellaneous Computer Supplies
Target Applications: Data Entry
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Robert Stroh
Head of Sales: H.E. LeClaire
Geographic Coverage: National
Year Established: 1949
Number of Employees: 1,000

TAK AUTOMATION, INC.
958 Cowan Road
Burlingame, CA 94018
(415) 347-9851
Major Markets: Computer Manufacturing, OEM Computer Systems
Target Industries: Metal, Shipyards
Target Applications: Process Control; Materials Handling
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing/Sales: Karl R. Wolfe
Head of Software: Rita Levinson
Head of Engineering: Anthony Milosz
Geographic Coverage: International
Year Established: 1975
Number of Employees: 70

TANDEM COMPUTER, INC.
19333 Vallco Pkwy
Cupertino, CA 95014
(408) 725-6000
Major Markets: Computer Terminal Peripheral and Communications Equipment Manufacturing
Contacts:
Head of Marketing: David Mackie
Head of Sales: Jerry Peterson
Head of Engineering: Larry Launch
Head of Customer Service: Jerry Everett
Geographic Coverage: International
Year Established: 1974
Number of Employees: 4,000

TANDY CORP.
Radio Shack Division
1800 One Tandy Center
Fort Worth, TX 76102
(817) 390-3011
Major Markets: Computer Terminal, Peripheral and Communications Equipment Manufacturing, OEM Computer Systems, Software House, Dealer/Distributor; Maintenance/Other Services
Target Industries: Legal, Medical, Real Estate, General Business
Net Sales: More than $100 Million (1982)
Contacts:
Head of Marketing: Ron Stagell
Geographic Coverage: International
Year Established: 1921
Number of Employees: 20,000

TANO CORP.
4301 Poche Court W
New Orleans, LA 70129
(504) 254-3500
Major Markets: Component and Computer Manufacturing, OEM Computer Systems, Systems House (OEM)
Target Industries: Marine, Oil, Gas, Energy
Target Applications: Energy Management, Pipeline Control
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: Ben Albert
Head of Sales: Thomas M. Lowrey
Head of Software: A.J. Finnin
Head of Engineering: Walter J. Berge Jr.
Geographic Coverage: International
Year Established: 1968
Number of Employees: 450

TARBELL ELECTRONICS
Suite B
950 Dovlen Place
Carson, CA 90746
(213) 538-4251
Major Markets: Component and Computer Manufacturing, OEM Computer Systems, Software House, Systems House (OEM)
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Donald E. Tarbell
Geographic Coverage: National
Year Established: 1976
Number of Employees: 10

TAYLOR INSTRUMENT CO.
95 Main St
P.O. Box 110
Rochester, NY 14604
(716) 235-5000
Major Markets: OEM Computer Systems, Component and Computer Manufacturing, Software House, Systems House (OEM); Maintenance/Other Services
Target Industries: Engineering, Chemical, Pharmaceutical, Industrial
Target Applications: Process Control, Information Management; Plant Management
Contacts:
Head of Marketing: Jerry Grader
Head of Sales: Edward Gnebel
Geographic Coverage: International
Year Established: 1969
Number of Employees: 3,000

TBM, INC. (TYPE-A-LINE BUSINESS MACHINES)
168 E. Second S.
Salt Lake City, UT 84111
(801) 521-5310
Major Markets: Computer Manufacturing; OEM Computer Systems, Software House, Dealer/Distributor; Miscellaneous Computer Supplies
Target Industries: Auto Parts, Manufacturing, Legal, Medical
Target Applications: Accounting
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Sales: Greg O. Bowen
Geographic Coverage: Regional
Year Established: 1962
Number of Employees: 20

TECHNICO, INC.
2901 Druid Park Drive
Columbia, MD 21215
(301) 669-1400
Major Markets: Computer Manufacturing; Software House
Target Industries: Education; Small Business, Industrial
Target Applications: Training, Office
Net Sales: $1 Million — $5 Million (1981)
Geographic Coverage: National
Year Established: 1976
Number of Employees: 10

TECMAR, INC.
23600 Mercantile Road
Cleveland, OH 44122
(216) 464-7410
Major Markets: Computer and Peripheral Manufacturing
Target Industries: Personal Computing, Scientific, Manufacturing
Target Applications: Industrial Control
Contacts:
Head of Sales: John Brandon
Head of Software: Kenneth Stern
Geographic Coverage: International
Year Established: 1975
Number of Employees: 70

TEKTRONIX, INC.
P.O. Box 500
Beaverton, OR 97077
(503) 627-7111
Major Markets: Component, Computer, Terminal, Peripheral and Communications Equipment Manufacturing; Software House, Maintenance/Other Services
Target Industries: Engineering, Manufacturing, Television
Target Applications: Test and Measurement, Graphics
Net Sales: Over $100 Million (1981)
Geographic Coverage: International
Year Established: 1946
Number of Employees: 22,000

TELCON INDUSTRIES, INC.
1401 N.W. 69th St.
Ft. Lauderdale, FL 33309
(305) 971-2250
Major Markets: Computer, Terminal, Peripheral and Communications Equipment Manufacturing; OEM Peripherals/Terminals and Computer Systems, Software House
Target Industries: Newspaper, Telecommunications
Contacts:
Head of Marketing/Sales: Ian Moss
Head of Software: George Gruber
Head of Engineering: Rod Namen
Geographic Coverage: International
Year Established: 1969
Number of Employees: 100

TELECTRONIC, INC.
Suite B
2759 S. Third W.
Salt Lake City, UT 84115
(801) 486-9266
Major Markets: Component, Computer and Communications Equipment Manufacturing, OEM Computer Systems, Software House, Systems House (OEM); Dealer/Distributor, Maintenance/Other Services
Target Industries: Hospitality; Telephone
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing: David J. Gray
Head of Software: Bill Larkin
Head of Engineering: Susan Sandberg
Geographic Coverage: National
Year Established: 1979

TELEFILE COMPUTER PRODUCTS, INC.
17131 Daimler St.
Irvine, CA 92714
(714) 557-6660
Major Markets: Computer Manufacturing
Contacts:
Head of Marketing: Jim Nishry
Head of Sales: C. De Gabriello
Head of Engineering: D. Bello
Geographic Coverage: International
Year Established: 1969
Number of Employees: 70

TELEGENIX, INC.
26 Olney Ave.
P.O. Box 5550
Cherry Hill, NJ 08003
(609) 424-5220
Major Markets: Computer and Terminal Manufacturing
Contacts:
Head of Marketing: Donald D. Dodszuweit
Geographic Coverage: International
Year Established: 1968
Number of Employees: 70

TELERAM COMMUNICATIONS CORP.
2 Corporation Park Drive
White Plains, NY 10604
(914) 694-9270
Major Markets: Computer and Terminal Manufacturing
Target Industries: Newspapers, Graphic Arts
Target Applications: Text Editing
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Robert Schwebel
Head of Sales: Jerry Gallagher

Head of Engineering: John K Koffel
Geographic Coverage: National
Year Established: 1973
Number of Employees: 70

TELEVIDEO SYSTEMS, INC.
1170 Morse Ave
Sunnyvale, CA 94086
(408) 745-7760
Major Markets: Computer and Terminal Manufacturing, Software House
Target Industries: Small Business
Contacts:
Head of Marketing: R DuBridge
Head of Sales: S Tatum
Head of Software: Chuck Kempton
Geographic Coverage: International
Year Established: 1977
Number of Employees: 525

TESDATA, INC.
7921 Jones Branch Drive
McLean, VA 22102
(703) 827-4000
Major Markets: OEM Computer Systems, Computer Manufacturing
Target Industries: Large Manufacturers
Target Applications: Performance Measurement
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing: David Planning
Head of Engineering: John De Wit
Head of Customer Service: Vincent Roccanova
Geographic Coverage: International
Year Established: 1972
Number of Employees: 200

TEXAS INSTRUMENTS, INC.
Data Systems Group
P O Box 202145
Dallas, TX 75220
Major Markets: Component, Computer, Terminal, Peripheral and Communications Equipment Manufacturing
Net Sales: More than $100 Million (1981)
Contacts:
Head of Marketing: Charles M Clough
Head of Engineering: George H Hermeier
Geographic Coverage: International
Year Established: 1930
Number of Employees: 90,000

THOUGHTWORKS, INC.
3532 W Thomas Road
Phoenix, AZ 85019
(602) 269-6841
Major Markets: Systems House (OEM); OEM Computer Systems, Computer and Peripheral Manufacturing
Target Industries: Military, Education
Target Applications: OA, Education
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Roy Evans
Geographic Coverage: Regional
Year Established: 1978

3 R COMPUTERS, INC.
18 Lyman St
Westboro, MA 01581
(617) 366-5300
Major Markets: Computer Manufacturing, Software House, Maintenance/Other Services
Target Industries: Commercial
Contacts:
Head of Marketing/Sales: Brad Hebert
Geographic Coverage: International
Year Established: 1981
Number of Employees: 50

THREE RIVERS COMPUTER CORP.
720 Gross St
Pittsburgh, PA 15224
(412) 621-8250
Major Market: Computer Manufacturing
Target Industries: OEM
Target Applications: Personal Workstation
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing/Sales: Frank Williams
Head of Software/Engineering: James Marshall
Head of Customer Service: Frank Sownski
Geographic Coverage: International
Year Established: 1974
Number of Employees: 160

TIMEX COMPUTER CORP.
1579 Straits Tnpk
Middlebury, CT 06725
(203) 573-5000
Major Markets: Computer Manufacturing, Dealer/Distributor
Target Industries: Education
Target Applications: Education, Home, Business, Entertainment
Contacts:
Head of Sales: Don LaDieu
Geographic Coverage: International
Year Established: 1982

TORCH COMPUTERS, LTD.
Suite 1504
61 Commerce Way
Woburn, MA 01801
(617) 935-2575
Major Market: Computer Manufacturing
Contacts:
Head of Sales: Fred Madeira
Head of Software: Raymond Anderson
Geographic Coverage: International
Year Established: 1981
Number of Employees: 80

TOSHIBA AMERICA, INC.
I S D
2441 Michelle Drive
Tustin, CA 92680
(714) 730-5000
Major Markets: Peripheral, Office Equipment and Computer Manufacturing
Target Industries: Business
Contacts:
Head of Marketing: James Getzinger
Head of Sales: Phil Vertin
Geographic Coverage: National
Year Established: 1981
Number of Employees: 60

TPC, INC.
1750 New Highway
Farmingdale, NY 11735
(516) 420-9740
Major Market: Computer Manufacturing
Target Industries: Banking, Medical, Government
Contacts:
Head of Marketing/Sales: Julio Rodriguez
Geographic Coverage: International
Year Established: 1982
Number of Employees: 13

TRIFORMATION SYSTEMS, INC.
3132 S E Jay St
Stuart, FL 33494
(305) 283-4817
Major Markets: OEM Peripherals/Terminals, Computer Manufacturing
Net Sales: $500,000 — $1 Million (1982)
Geographic Coverage: International
Year Established: 1969
Number of Employees: 56

TRW-FUJITSU CORP.
9841 Airport Blvd
Los Angeles, CA 90045
(213) 642-4706
Major Markets: Computer, Terminal, Peripheral and Communications Equipment Manufacturing, Software House, Dealer/Distributor; Maintenance/Other Services
Target Industries: Banking, Retail
Geographic Coverage: National
Year Established: 1980

UNICO, INC.
3725 Nicholson Road
Franksville, WI 53126
(414) 886-5678
Major Markets: Component and Computer Manufacturing, OEM Computer Systems
Target Industries: Automotive, Wood Products
Target Applications: Press Feeders, Flying Cutoff; Rotor Motion
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing/Sales: Al Engle
Head of Software: Robert Brietzmann
Head of Engineering: William Hammel
Head of Customer Service: Donald Pulning
Geographic Coverage: International
Year Established: 1968
Number of Employees: 175

UNICORP CORP.
202 Plaza Towers
Springfield, MO 65804
(417) 883-6800
Major Markets: OEM Computer Systems, Software House, Systems House (OEM); Dealer/Distributor; Maintenance/Other Services, Computer Manufacturing
Target Industries: Legal, Small Utilities, Risk Management, General Accounting
Target Applications: Litigation Support, WP, Unix
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Software: Gary F York
Geographic Coverage: International
Year Established: 1977

UNITED TECHNOLOGIES COM DEV
2006 Wilfield Industrial Way
P O Box 5336
Sarasota, FL 33580
(813) 753-6411
Major Markets: Component, Computer and Communications Equipment Manufacturing, Software House, Maintenance/Other Services
Target Industries: Distribution
Target Applications: Telecommunications
Contacts:
Head of Marketing: William Hutchinson
Geographic Coverage: National
Year Established: 1975
Number of Employees: 200

VECTOR GRAPHIC, INC.
500 N Ventura Park Road
Thousand Oaks, CA 91320
(805) 499-5831
Major Markets: Computer and Communications Equipment Manufacturing
Net Sales: $25 Million — $100 Million (1982)
Contacts:
Head of Marketing: Fred Snow
Geographic Coverage: International
Year Established: 1976
Number of Employees: 350

VICOM SYSTEMS, INC.
2307 Benng Drive
San Jose, CA 95131
(408) 946-5660
Major Markets: Component, Computer, Terminal and Peripheral Manufacturing, Maintenance/Other Services
Target Industries: Oil, Medical
Contacts:
Head of Marketing: Don McCook
Head of Sales: Richard P LaJaunesse
Head of Software: William Zech
Head of Engineering: Don Sanahre
Head of Customer Service: Robert Cain
Geographic Coverage: International
Year Established: 1982
Number of Employees: 70

VICTOR TECHNOLOGIES, INC.
Data Products Division
3900 N Rockwell St
Chicago IL 60618
(312) 539-8200
Major Markets: Peripheral and Computer Manufacturing
Target Industries: OEM
Contacts:
Head of Sales: Ron Wilson
Geographic Coverage: International
Year Established: 1958
Number of Employees: 1,300

VICTORY COMPUTER SYSTEMS, INC.
Suite 300
2055 Gateway Place
San Jose, CA 95110
(408) 295-4800
Major Market: Computer Manufacturing
Target Industries: Distribution, OEM
Contacts:
Head of Engineering: Jim Willott
Geographic Coverage: International
Year Established: 1981
Number of Employees: 34

WANG LABORATORIES, INC.
1 Industrial Ave
Lowell MA 01851
(617) 459-5000
Major Markets: Computer, Terminal,

Vendors

Peripheral Communications Equipment and Office Equipment Manufacturing
Target Industries: Banking, Insurance, Legal, State/Local Government
Target Applications: Data Entry, Electronic Mail, Human Resource Management, Programmer Utilities
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing/Sales: John F Cunningham
Head of Software/Engineering: Frederick A Wang
Geographic Coverage: International
Year Established: 1951
Number of Employees: 19,200

WAVE MATE, INC.
14009 S Crenshaw Blvd
Hawthorne, CA 90250
(213) 978-8600
Major Market: Computer Manufacturing
Target Industries: OEM
Net Sales: $1 Million — $5 Million (1981)
Contacts:
Head of Marketing: Jeffrey Post
Head of Engineering: Dennis Painter
Geographic Coverage: International
Year Established: 1977
Number of Employees: 8

WESTERN DIGITAL CORP.
2445 McCabe Way
Irvine, CA 92714
(714) 557-3550
Major Markets: Component, Computer and Communications Equipment Manufacturing
Target Industries: Computer, Telecommunication
Net Sales: $25 Million — $100 Million (1982)
Contacts:
Head of Sales: Joseph Pieso
Geographic Coverage: National
Year Established: 1970
Number of Employees: 803

WESTERN TELECOMPUTING CORP.
202 E Kagy Blvd
Bozeman, MT 59715
(406) 586-1511
Major Market: Computer Manufacturing
Target Industries: Pollution; Weather
Contacts:
Head of Marketing: Bob Johnson
Geographic Coverage: International
Year Established: 1969
Number of Employees: 10

WICAT SYSTEMS, INC.
1875 S State St
P.O. Box 539
Orem, UT 84057
(801) 224-6400
Major Markets: Computer Manufacturing, Software House; OEM Peripherals/Terminals
Target Industries: Education; General Business
Target Applications: Accounting; WP
Contacts:
Head of Marketing: Frank Richardson
Head of Software: Tom Seal
Head of Engineering: David Bailey
Geographic Coverage: International
Year Established: 1976
Number of Employees: 450

WINTEK CORP.
1801 South St
Lafayette, IN 47904
(317) 742-8428
Major Markets: Software House, Computer Manufacturing, Maintenance/Other Services
Target Industries: OEM
Target Applications: Industrial Control, General Business
Contacts:
Head of Software: Stephen E. Belter
Head of Engineering: James B. Wilson
Geographic Coverage: National
Year Established: 1973
Number of Employees: 12

XEROX CORP.
800 Longridge Road
P.O. Box 1600
Stamford, CT 06904
(203) 329-8700
Major Markets: Computer, Terminal, Peripheral and Office Equipment Manufacturing; Software House, Systems House (OEM); Maintenance/Other Services, Miscellaneous Computer Supplies
Target Industries: Government, General Business
Net Sales: Over $100 Million (1981)
Contacts:
Head of Customer Service: John V. Titsworth
Geographic Coverage: International
Year Established: 1906
Number of Employees: 121,000

XITEK CORP.
9861 Chartwell
Dallas, TX 75243
(214) 349-2490
Major Markets: Component, Computer and Peripheral Manufacturing; OEM Computer Systems, Dealer/Distributor
Target Industries: Industrial, Consulting
Contacts:
Head of Sales: R. Ballow
Geographic Coverage: International
Year Established: 1977
Number of Employees: 5

XYCOM, INC.
P.O. Box 984
Ann Arbor, MI 48106
(313) 429-4970
Major Market: Computer Manufacturing
Target Industries: Manufacturing
Contacts:
Head of Marketing: James McEachen
Head of Sales: Art Harmala
Geographic Coverage: International (Japan, Canada)
Year Established: 1969
Number of Employees: 200

ZAX CORP.
8311 Westminster Ave
Westminster, CA 92683
(714) 989-2373
Major Market: Computer Manufacturing
Target Industries: Engineering, General Business
Net Sales: $1 Million — $5 Million (1982)
Contacts:
Head of Marketing: Hal Horrocks
Geographic Coverage: International
Year Established: 1973
Number of Employees: 75

ZEDA COMPUTERS INTERNATIONAL, LTD.
1662 W. 820 N.
Provo, UT 84601
(801) 377-9948
Major Market: Computer Manufacturing, Software House, OEM Computer Systems
Target Industries: Small Business
Target Applications: Accounting, Electronic Mail
Net Sales: $1 Million — $5 Million (1981)
Geographic Coverage: National
Year Established: 1978
Number of Employees: 10

ZENDEX CORP.
6644 Sierra Lane
Dublin, CA 94568
(415) 828-3000
Major Markets: Component and Computer Manufacturing
Target Industries: Industrial Control
Contacts:
Head of Marketing/Sales: Rob Richardson
Head of Engineering: John Hight
Geographic Coverage: International
Year Established: 1979
Number of Employees: 30

ZENITH DATA SYSTEMS
1000 Milwaukee Ave
Glenview, IL 60025
(312) 391-8860
Major Markets: Computer, Terminal, Peripheral, Communications Equipment and Office Equipment Manufacturing, OEM Peripherals/Terminals and Computer Systems, Miscellaneous Computer Supplies
Target Industries: Fortune 1000, Small Business, OEM Computer Equipment
Target Applications: OA, Graphics, Accounting
Contacts:
Head of Marketing: Robert K. Reid
Head of Sales: John Frank
Head of Software: Tom Dornback
Head of Engineering: Hoy Chang
Geographic Coverage: International
Year Established: 1979
Number of Employees: 1,000

ZENTEC CORP.
2400 Walsh Ave
Santa Clara, CA 95050
(408) 727-7667
Major Markets: Computer and Terminal Manufacturing
Target Industries: OEM
Net Sales: $5 Million — $25 Million (1981)
Contacts:
Head of Marketing/Sales: Paul Lavoie
Head of Software/Engineering: David Stallard
Geographic Coverage: International
Year Established: 1973
Number of Employees: 250

ZERO ONE COMPUTER CORP.
25 Sheer Plaza
Plainview, NY 11803
(516) 249-0999
Major Market: Computer Manufacturing
Target Industries: Small Business
Contacts:
Head of Marketing: Thomas Imperato
Geographic Coverage: National
Year Established: 1982
Number of Employees: 23

ZILOG, INC.
1315 Dell Ave
Campbell, CA 95008
(408) 370-8000
Major Markets: Component and Computer Manufacturing, Dealer/Distributor, Maintenance/Other Services
Net Sales: $25 Million — $100 Million (1981)
Contacts:
Head of Marketing: David Guzeman
Head of Sales/Engineering: Bernard Vonderschmitt
Geographic Coverage: International
Year Established: 1974
Number of Employees: 1,000

ZOBEX
Suite J
7343 Ronson Road
San Diego, CA 92111
(714) 571-6971
Major Markets: Computer and Peripheral Manufacturing
Geographic Coverage: National
Year Established: 1979

ZONIC CORP.
2000 Ford Circle
Milford, OH 45150
(513) 248-1911
Major Markets: Computer Manufacturing, OEM Computer Systems
Target Industries: Automotive, Petroleum, Chemical, Aerospace
Contacts:
Head of Marketing: Vince Heuring
Head of Sales: David Stelzer
Head of Software: James Deel
Head of Engineering: James Webb
Head of Customer Service: Rick Schnell
Geographic Coverage: International
Year Established: 1970
Number of Employees: 60

XYDECO, INC.
636 Highlands Drive
Baton Rouge, LA 70810
(504) 291-5530
Major Markets: Software House; Component and Computer Manufacturing, OEM Computer Systems; Maintenance/Other Services
Target Industries: Manufacturing
Target Applications: Process Control
Net Sales: $100,000 — $500,000 (1981)
Contacts:
Head of Marketing/Sales: Gary Lane
Head of Engineering: Robert Mitchell
Geographic Coverage: National
Year Established: 1977
Number of Employees: 18

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AMDAHL CORP.
470V/7 A 470V/8 SERIES
Word Length: 31-bit
Operating System: MVS/SP, SVS, VM/SP, VSI
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 4M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 16
Communications Protocols: Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,515,000
Maintenance: On-site
Date First Installed: 1978
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-1)

AMDAHL CORP.
580 MODEL 5850
Operating System: MVS/SP, VM/XA, VM/SP, ACP
Languages Supported: Cobol, Fortran, Basic, Pascal
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 32
Communications Protocols: Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,750,000
Maintenance: On-site
Average Maintenance Fee: $8,500
Date First Installed: 1983

AMDAHL CORP.
580 MODEL 5860
Operating System: MVS/SP, VM/SP, ACP
Languages Supported: Cobol, Fortran, Basic, Pascal
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 32
Communications Protocols: Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,950,000
Maintenance: On-site
Date First Installed: August 1982
Number Installed to Date: 10 — 50

AMDAHL CORP.
580-5870/5880
Operating System: MVS/SP, ACP, VM/SP
Languages Supported: Cobol, Fortran, Basic, Pascal
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 32
Communications Protocols: Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,400,000
Maintenance: On-site

BRAEGEN CORP.
8000 SERIES
Word Length: 10-bit
Operating System: DOS/US, DOS/OS, M, ALLTAMS
Languages Supported: Braegen
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 32
Communications Protocols: Bisynchronous, FDCC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $21,000 to $50,000
Maintenance: On-site
Average Maintenance Fee: $265
Date First Installed: February 1973
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-3)

BURROUGHS CORP.
B2910
Word Length: 32-bit
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, RPG, PL/1
Minimum Memory: 512K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 1.3G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Maintenance: On-site
Date First Installed: 1981
(See Vendor Profile Page V-3)

BURROUGHS CORP.
B2930
Word Length: 32-bit
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 512K bytes
Maximum Memory: 4.8M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 2.6G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $199,500
Maintenance: On-site
Date First Installed: 1981

BURROUGHS CORP.
B3955
Word Length: 32-bit
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 2M bytes
Maximum Memory: 4.8M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 2.6G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $304,500
Maintenance: On-site
Date First Installed: April 1982
Number Installed to Date: 45

BURROUGHS CORP.
B4955
Word Length: 32-bit
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 5M bytes
Maximum Memory: 10M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 2.6G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $780,000
Maintenance: On-site
Date First Installed: 1983

BURROUGHS CORP.
B5900 SERIES
Word Length: 48-bit
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 1.5M bytes
Maximum Memory: 6.2M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 5.2G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $750,000
Maintenance: On-site
Date First Installed: 1981

BURROUGHS CORP.
B6930
Word Length: 48-bit
Operating System: MCP
Languages Supported: Fortran, Cobol, Basic, RPG, Algol
Minimum Memory: 3.1M bytes
Maximum Memory: 6.2M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 105G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $462,000
Maintenance: On-site
Date First Installed: 1980

BURROUGHS CORP.
B7803
Word Length: 48-bit
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Maximum Memory: 6M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 105.4G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,013,251
Maintenance: On-site
Date First Installed: 1978

BURROUGHS CORP.
B7830
Word Length: 48-bit
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Maximum Memory: 6M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 105.4G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,785,000
Maintenance: On-site
Date First Installed: 1978

BURROUGHS CORP.
B7850
Word Length: 48-bit
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Maximum Memory: 6M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 105.4G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,150,000
Maintenance: On-site
Date First Installed: 1978

BURROUGHS CORP.
B7900 (F,H,K) SERIES
Operating System: MCP
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 12M bytes
Maximum Memory: 36M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 794M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,500,000
Date First Installed: November 1983

CAMBEX CORP.
1636 SERIES
Word Length: 32-bit
Operating System: DOS/VS, DOS/VSE, OS/VSI, SVS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $95,000 to $200,000
Maintenance: On-site
Date First Installed: 1979
Number Installed to Date: Less than 10
(See Vendor Profile Page V-4)

CAMBEX CORP.
1640 SERIES
Word Length: 32-bit
Operating System: DOS/VS,

DOS/VSE, OS/VSI, SVS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $150,000 to $300,000
Maintenance: On-site
Date First Installed: 1979
Number Installed to Date: 10 — 50

CAMBEX CORP.
1651 SERIES
Word Length: 32-bit
Operating System: VOS/VS, DOS/VSE, OS/VSI, SVS
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Purchase Price: $350,000
Maintenance: On-site
Date First Installed: March 1982
Number Installed to Date: Under 10

COMMUNICATION MANUFACTURING CO.
4000
Specific Application: Security Access Control
Word Length: 8-bit
Languages Supported: CMC Procall
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 158M bytes
Maximum I/O Ports: 8
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $125,000
Maintenance: Dealer network
Date First Installed: January 1974
Number Installed to Date: 50
(See Vendor Profile Page V-5)

CONTROL DATA CORP.
CYBER 170/815
Word Length: 60-bit
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Maximum Memory: 1M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $195,000
Maintenance: On-site
Date First Installed: April 1983
(See Vendor Profile Page V-6)

CONTROL DATA CORP.
CYBER 170/825
Word Length: 60-bit
Operating System: NOS2
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1
Minimum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 16 4G bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous, Synchronous Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $370,000 to $3 230,000
Average Maintenance Fee: $1,115
Date First Installed: May 1982

CONTROL DATA CORP.
CYBER 170/835
Word Length: 60-bit
Operating System: NOS
Languages Supported: Cobol, Fortran, Pascal, APL, PL/1, Algol
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1 6G bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous, Synchronous Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $820,000
Maintenance: On-site
Average Maintenance Fee: $2 385
Date First Installed: May 1982

CONTROL DATA CORP.
CYBER 170/855
Word Length: 60-bit
Operating System: NOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1 6G bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1 935,000
Maintenance: On-site
Average Maintenance Fee: $4,840
Date First Installed: July 1982

CONTROL DATA CORP.
CYBER 170/865
Word Length: 60-bit
Operating System: NOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 6 6G bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2 465,000
Average Maintenance Fee: $6 500
Date First Installed: November 1982
Number Installed to Date:

CONTROL DATA CORP.
CYBER 170/875
Word Length: 60-bit
Operating System: NOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 512K bytes
Maximum Memory: 200K bytes
Multiple Users: Yes
Maximum On-Line Storage: 6 4G bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,230 000
Maintenance: On-site
Average Maintenance Fee: $9 100
Date First Installed: February 1983

CONTROL DATA CORP.
CYBER 175
Word Length: 60-bit
Operating System: NOS, NOS/BE
Languages Supported: Cobol, Fortran, Basic, APL, PL/1, Algol Compass
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 11G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5 057,060
Maintenance: On-site
Date First Installed: 1978

CONTROL DATA CORP.
CYBER 203
Word Length: 64-bit
Operating System: CYBER 200
Languages Supported: Fortran, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,800,000 to $11,700 000
Maintenance: On-site
Date First Installed: 1979
Number Installed to Date: Less than 10

CONTROL DATA CORP.
CYBER 205
Word Length: 64-bit
Operating System: CYBER 200
Languages Supported: Fortran, Assembler
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,900 000 to $12 000,000
Maintenance: On-site
Date First Installed: June 1980

CONTROL DATA CORP.
CYBER 205/800 SERIES
Word Length: 32-bit
Operating System. CYBER 200
Languages Supported: Fortran, Assembler
Maximum Memory: 16M bytes
Multiple Users. Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,000,000 to $12 000,000
Maintenance: On-site

CRAY RESEARCH, INC.
CRAY 1/M SERIES
Word Length: 64-bit
Operating System: Proprietary
Languages Supported: Fortran
Minimum Memory: 1 2M bytes
Maximum Memory: 5M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,000,000
Maintenance: On-site
Date First Installed: 1976
Number Installed to Date: 51
(See Vendor Profile Page V-6)

CRAY RESEARCH, INC.
CRAY X-MP
Word Length: 64-bit
Operating System: Proprietary
Languages Supported: Fortran
Minimum Memory: 1 2M bytes
Maximum Memory: 5M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $11,000,000
Maintenance: On-site
Date First Installed: 1982
Number Installed to Date: 1.000 — 5.000

DATAWEST CORP.
460
Specific Application: Array Processor
Word Length: 36-bit
Minimum Memory: 16K bytes
Maximum Memory: 1M bytes
Multiple Users. Yes, 32
Maximum I/O Ports: 32
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase; Lease
Purchase Price: $60,000 to $100,000
Maintenance: On-site
(See Vendor Profile Page V-7)

DATAWEST CORP.
470
Specific Application: Array Processor
Word Length: 36-bit
Languages Supported: Fortran
Minimum Memory: 16K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 32
Maximum I/O Ports: 32

Mainframes

Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $200,000 to $400,000
Maintenance: On-site

DATAWEST CORP.
400
Specific Application: Array Processor
Word Length: 36-bit
Minimum Memory: 16K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 32
Maximum I/O Ports: 32
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $500,000 to $1,000,000
Maintenance: On-site
Date First Installed: 1981

DENELCOR, INC.
H-1000
Specific Application: Aerospace
Word Length: 64-bit
Operating System: UNIX
Languages Supported: Fortran
Minimum Memory: 256K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 19G bytes
Maximum I/O Ports: 31
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,600,000 to $15,000,000
Maintenance: On-site
Date First Installed: February 1982
Number Installed to Date: Under 10
(See Vendor Profile Page V-8)

DIGITAL EQUIPMENT CORP.

DEC SYSTEM 1060
Word Length: 36-bit
Operating System: TOPS 10
Languages Supported: Cobol, Fortran, Basic, APL, Bliss, Algol
Minimum Memory: 256K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 200
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $794,000
Maintenance: On-site
(See Vendor Profile Page V-8)

DIGITAL EQUIPMENT CORP.
DEC SYSTEM 1091
Word Length: 36-bit
Operating System: TOPS 10
Languages Supported: Cobol, Fortran, Basic, APL, Bliss, Algol
Minimum Memory: 256K bytes
Maximum Memory: 3M bytes
Multiple Users: Yes, 150
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $595,000
Maintenance: On-site
(See Vendor Profile Page V-8)

DIGITAL EQUIPMENT CORP.
DEC SYSTEM 2020
Word Length: 36-bit
Operating System: TOPS 10, TOPS 20
Languages Supported: Cobol, Fortran, Basic, Basic plus 2, APL, Bliss, Algol
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 20
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Purchase Price: $170,000
Maintenance: On-site, Remote diagnostics
Date First Installed: July 1978

DIGITAL EQUIPMENT CORP.
DEC SYSTEM 2040
Word Length: 36-bit
Operating System: TOPS 20
Languages Supported: Cobol, Fortran, Basic, Basic plus 2, APL, Bliss, Algol
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 100
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Purchase Price: $483,000
Maintenance: On-site, Remote diagnostics
Date First Installed: June 1976

DIGITAL EQUIPMENT CORP.
DEC SYSTEM 2060
Operating System: TOPS 20
Languages Supported: Cobol, Fortran, Basic, Basic plus 2, APL, Bliss, Algol
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 100
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Purchase Price: $557,000
Maintenance: On-site
Date First Installed: July 1979

FLOATING POINT SYSTEMS, INC.
AP-120B
Specific Application: Array Processor
Word Length: 38-bit
Languages Supported: Fortran
Minimum Memory: 8K bytes
Maximum Memory: 64K bytes
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Purchase Price: $60,000 to $150,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $500
(See Vendor Profile Page V-9)

FLOATING POINT SYSTEMS, INC.
AP-190V
Specific Application: Array Processor
Word Length: 38-bit
Languages Supported: Fortran
Minimum Memory: 8K bytes
Maximum Memory: 512K bytes
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Purchase Price: $93,500 to $160,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $830

FLOATING POINT SYSTEMS, INC.
AP-190L
Specific Application: Array Processor
Word Length: 38-bit
Languages Supported: Fortran
Minimum Memory: 8K bytes
Maximum Memory: 512K bytes
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Purchase Price: $168,000 to $285,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $1,300

FLOATING POINT SYSTEMS, INC.
FPS-100
Specific Application: Array Processor
Word Length: 38-bit
Languages Supported: Fortran
Minimum Memory: 8K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $40,500 to $70,000
Maintenance: Remote diagnostics
Average Maintenance Fee: $230
Date First Installed: January 1979
Number Installed to Date: 1,000

FLOATING POINT SYSTEMS, INC.
FPS 164
Word Length: 64-bit
Languages Supported: Fortran
Minimum Memory: 256K bytes
Maximum Memory: 7.2M bytes
Maximum On-Line Storage: 540M bytes
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Purchase Price: $226,000 to $1,000,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $1,883

FOUR-PHASE SYSTEMS, INC.
SYSTEM 310
Word Length: 32-bit
Operating System: DOS, OS/VS1
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.6G bytes
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Maintenance: On-site
Date First Installed: February 1981
(see Vendor Profile Page V-10)

HONEYWELL, INC.
DPS 8/20
Word Length: 36-bit
Operating System: GCOS 8
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 35G bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $150,000
Maintenance: On-site
Average Maintenance Fee: $320
Date First Installed: 1980
(See Vendor Profile Page V-10)

HONEYWELL, INC.
DPS 8/20C
Word Length: 36-bit
Operating System: CP6
Languages Supported: Cobol, Fortran, Basic, RPG, APL, PL6, Gmap, IDP, TE
Minimum Memory: 600K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 33G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $150,000
Maintenance: On-site
Average Maintenance Fee: $320
Date First Installed: 1981

HONEYWELL, INC.
DPS 8/44
Word Length: 36-bit
Operating System: GCOS 8, GCOS 66
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 35G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $198,000
Maintenance: On-site
Average Maintenance Fee: $500
Date First Installed: 1980

HONEYWELL, INC.
DPS 8/44C
Word Length: 36-bit
Operating System: CP6
Languages Supported: Cobol, Fortran, Basic, RPG, APL, PL/6, Gmap, IDP, T
Minimum Memory: 8M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 33G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC

Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $200,000
Maintenance: On-site
Average Maintenance Fee: $535
Date First Installed: 1981

HONEYWELL, INC.
DPS 8/44D
Word Length: 36-bit
Operating System: GCOS 8, GCOS 66
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 35G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $350,000
Maintenance: On-site
Average Maintenance Fee: $1,000
Date First Installed: 1980

HONEYWELL, INC.
DPS 8/50C
Word Length: 36-bit
Operating System: CP6
Languages Supported: Cobol, Fortran, Basic, RPG, APL, PL/6, Gmap, IDP, TE
Minimum Memory: 16M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 132G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $265,000
Maintenance: On-site
Average Maintenance Fee: $977
Date First Installed: 1661

HONEYWELL, INC.
DPS 8/52
Word Length: 36-bit
Operating System: GCOS 8, GCOS 66
Languages Supported: Cobol, PL/1; Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 2M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 35G bytes
Communications Protocols: Asynbhronous, Synchronous, HDLC Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $450,000
Maintenance: On-site
Average Maintenance Fee: $2,000
Date First Installed: 1980

HONEYWELL, INC.
DPS 8/52C
Word Length: 36-bit
Operating System: CP6
Languages Supported: Cobol, Fortran, Basic, RPG, APL, Gmap, IDP, Text, P
Minimum Memory: 16M bytes
Maximum Memory: 64M bytes
Communications Protocols: Asynchronous, SDLC, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $450,000
Maintenance: On-site
Average Maintenance Fee: $1,500
Date First Installed: 1981

HONEYWELL, INC.
DPS 8/62
Word Length: 36-bit
Operating System: GCOS 8, GCOS 66
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 35G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $680,000
Maintenance: On-site
Average Maintenance Fee: $2,400
Date First Installed: 1980

HONEYWELL, INC.
DPS 8/62C
Word Length: 36-bit
Operating System: CP6
Languages Supported: Cobol, Fortran, Basic, RPG, APL, Gmap, IDP, Text, P
Minimum Memory: 16M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 264G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $680,000
Maintenance: On-site
Average Maintenance Fee: $24,000
Date First Installed: 1981

HONEYWELL, INC.
DPS 8/70
Word Length: 36-bit
Operating System: GCOS 8, GCOS 66
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 64M bytes
Multiple Users: Yes
Maximum On-Line Storage: 35G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,200,000
Maintenance: On-site
Average Maintenance Fee: $3,700
Date First Installed: 1980

HONEYWELL, INC.
DPS 8/70C
Word Length: 36-bit
Operating System: CP6
Languages Supported: Cobol, Fortran, Basic, RPG, APL, Gmap, IDP, Text, P
Minimum Memory: 16M bytes
Maximum Memory: 64M bytes
Multiple Users: Yes
Maximum On-Line Storage: 264G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,200,000
Maintenance: On-site
Average Maintenance Fee: $3,700
Date First Installed: 1980

HONEYWELL, INC.
DPS 8/70M
Word Length: 36-bit
Operating System: GCOS 8, GCOS 66, Multics
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 1M bytes
Maximum Memory: 64M bytes
Multiple Users: Yes
Maximum On-Line Storage: 35G bytes
Communications Protocols: Asynchronous, Synchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,300,000
Maintenance: On-site
Average Maintenance Fee: $5,100
Date First Installed: 1980

HONEYWELL, INC.
DPS 66
Specific Application: Distributed DP
Word Length: 36-bit
Operating System: GCOS 8
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1, Gmap, GPSS, Lisp
Minimum Memory: 16M bytes
Maximum Memory: 64M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,000,000 to $5,000,000
Maintenance: On-site
Average Maintenance Fee: $6,000

IBM
3031
Word Length: 64-bit
Operating System: DOS/VS, OS/VS2, OS/VS1, MVS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 2M bytes
Maximum Memory: 8.3M bytes
Multiple Users: Yes
Communicatoins Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $2,000,000
Maintenance: On-site
(See Vendor Profile Page V-10)

IBM
3032
Word Length: 64-bit
Operating System: MVS, VM/370
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 2M bytes
Maximum Memory: 8 3M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC,
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site

IBM
3033A
Word Length: 64-bit
Operating System: OS/VS1, MVS, OS/VS2, DOS/VSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 4 1M bytes
Maximum Memory: 25 1M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $6,800,000
Maintenance: On-site

IBM
3033M
Word Length: 64-bit
Operating System: OS/VS1, MVS, OS/VS2, DOS/VSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 4 1M bytes
Maximum Memory: 18 7M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $6,800,000
Maintenance: On-site

IBM
3033N
Word Length: 64-bit
Operating System: OS/VS1, MVS, OS-VS2, DOS/VSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 12 5M bytes
Maximum Memory: 16.7M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $500,000
Maintenance: On-site

IBM
3033S
Word Length: 64-bit
Operating System: OS/VS1, MVS, OS/VS2, DOS/VSE
Languages Supported: Cobol, PL/1;

Mainframes

Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 4 1M bytes
Maximum Memory: 16 7M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase; Rental; Lease
Purchase Price: $3,000,000
Maintenance: On-site
Number Installed to Date: 85

IBM
3033U
Word Length: 64-bit
Operating System: OS/VS1, MVS, OS/VS2, DOS/VSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 4 1M bytes
Maximum Memory: 25 1M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $6,880,000
Maintenance: On-site
Number Installed to Date: 1,560

IBM
3081D
Word Length: 64-bit
Operating System: DOS/VSE, OS/VS1, MVS/SP, MVS/370
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 16 7M bytes
Maximum Memory: 33 5M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $7,100,000
Maintenance: On-site
Date First Installed: October 1981

IBM
3081G
Word Length: 64-bit
Operating System: DOS/VSE, OS/VS1, MVS/SP, MVS/370
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 16 7M bytes
Maximum Memory: 33 5M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous; Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site

IBM
3081K
Word Length: 64-bit
Operating System: DOS/VSE, OS/VS1, MVS/SP, MVS/370
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 16 7M bytes
Maximum Memory: 33 5M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,000,000
Maintenance: On-site
Date First Installed: June 1982

IBM
3083B
Word Length: 64-bit
Operating System: DOS/VSE, MVS/SP, OS/VS1, DOS/VSE/AF
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 8 3M bytes
Maximum Memory: 33 5M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site
Date First Installed: March 1982

IBM
3083E
Word Length: 64-bit
Operating System: DOS/VSE, MVS/SP, OS/VS1, DOS/VSE/AF
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 8 3M bytes
Maximum Memory: 33 5M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC,
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site
Date First Installed: March 1982

IBM
3083J
Word Length: 64-bit
Operating System: DOS/VSE, MVS/SP, OS/VS1, DOS/VSE/AF
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 8 3M bytes
Maximum Memory: 33 5M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site
Date First Installed: March 1982

IBM
4331-1
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 514K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $335,000
Maintenance: On-site
Date First Installed: April 1979
Number Installed to Date: 6,700

IBM
4331-2
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 4 1M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $555,000+
Maintenance: On-site
Date First Installed: August 1980
Number Installed to Date: 1,345

IBM
4331-11
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 4 1M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $370,000
Maintenance: On-site
Date First Installed: March 1982

IBM
4341-1
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 4 1M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $660,000
Maintenance: On-site
Date First Installed: October 1979
Number Installed to Date: 8,695

IBM
4341-10
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 4 1M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Purchase Price: $700,000
Date First Installed: March 1982

IBM
4341-11
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 8 3M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $900,000
Maintenance: On-site
Date First Installed: March 1982

IBM
4341-12
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 16 7M bytes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $700,000
Maintenance: On-site

IBM
4341-2
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 1M bytes
Maximum Memory: 16 7M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $995,000
Maintenance: On-site
Date First Installed: March 1981
Number Installed to Date: 800

IBM
4341-9
Word Length: 32-bit
Operating System: DOS/VSE, DOS/VS, VM/370, VM/BSE
Languages Supported: Cobol, PL/1; Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 1M bytes
Maximum Memory: 4 1M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site

IBM
SYSTEM/38-3
Word Length: 32-bit
Operating System: CPF

Languages Supported: Cobol, RPG
Minimum Memory: 512K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $140,000
Maintenance: On-site
Date First Installed: July 1980

IBM
SYSTEM/38-4
Word Length: 32-bit
Operating System: CPF
Languages Supported: Cobol, RPG
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $145,000
Maintenance: On-site
Date First Installed: August 1981

IBM
SYSTEM/38-5
Word Length: 32-bit
Operating System: CPF
Languages Supported: Cobol, RPG
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $290,000
Maintenance: On-site
Date First Installed: July 1980

IBM
SYSTEM/38-7
Word Length: 32-bit
Operating System: CPF
Languages Supported: Cobol, RPG
Minimum Memory: 2M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $380,000
Maintenance: On-site
Date First Installed: July 1982

IBM
SYSTEM/38-8
Word Length: 32-bit
Operating System: CPF
Languages Supported: Cobol, RPG
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site

INFORMATEK STATES, INC.
SIMIS I
Specific Application: Nuclear Medicine
Word Length: 16-bit
Languages Supported: Fortran, Basic, Assembler M DES
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $60,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1980
(See Vendor Profile Page V-10)

INFORMATEK STATES, INC.
SIMIS II
Specific Application: Nuclear Medicine
Word Length: 16-bit
Operating System: V70
Languages Supported: Fortran, Basic, Assembler M DES
Minimum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 24M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $90,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1971

INFORMATEK STATES, INC.
SIMIS III
Specific Application: Nuclear Medicine
Word Length: 16-bit
Operating System: V70
Languages Supported: Fortran, Basic, Assembler M DES
Minimum Memory: 128K bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $100,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1971

INFORMATEK STATES, INC.
SIMIS IV
Specific Application: Nuclear Medicine
Word Length: 16-bit
Operating System: V70
Languages Supported: Fortran, Basic, Assembler M DES
Minimum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 30M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $150,000
Maintenance: On-site, Return to manufacturing facility

INFORMATEK STATES, INC.
SIMIS V
Specific Application: Nuclear Medicin.
Word Length: 16-bit
Operating System: V70
Languages Supported: Fortran, Basic, Assembler M DES
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 30M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase Lease
Purchase Price: $150,000 to $180,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1981
Number Installed to Date: 100 — 500

IPL SYSTEMS, INC.
4438
Word Length: 64-bit
Operating System: OS/VSI, MVS/SP, DOS/VSE, VM/370
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 1M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: HDLC, Asynchronous, Synchronous Bisynchronous, SDLC, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase Lease
Purchase Price: $135,000 to $151,000
Maintenance: On-site
Average Maintenance Fee: $540
Date First Installed: October 1980
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-12)

IPL SYSTEMS, INC.
4443
Word Length: 64-bit
Operating System: OS/VSI, MVS/SP, DOS/VSE, VM/370
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $180,000 to $226,000
Maintenance: On-site
Date First Installed: March 1980
Number Installed to Date: 50 — 100

IPL SYSTEMS, INC.
4446
Word Length: 64-bit
Operating System: OS/VSI, MVS/SP, DOS/VSE, VM/370
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase Lease
Purchase Price: $206,000
Maintenance: On-site
Date First Installed: December 1982
Number Installed to Date: 50 — 100

IPL SYSTEMS, INC.
4446
Word Length: 64-bit

Mainframes

Operating System: OS/VSI MVS/SP, DOS/VSE, VM/370
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 1M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $262,000 to $394,000
Maintenance: On-site
Date First Installed: December 1981

IPL SYSTEMS, INC.
4480
Word Length: 64-bit
Operating System: OS/VSI MVS/SP, DOS/VSE, VM/370
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 8M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $295,000 to $407,000
Maintenance: On-site
Date First Installed: 1982
Number Installed to Date: 50,000 — 100,000

IPL SYSTEMS, INC.
4480
Word Length: 64-bit
Operating System: OS/VSI, MVS/SP, DOS/VSE, VM/370
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $547,000 to $611,000
Maintenance: On-site
Date First Installed: 1982
Number Installed to Date: 10 — 50

MAGNUSON COMPUTER SYSTEMS, INC.
M80/30
Word Length: 32-bit
Operating System: DOS/VS, VM, MVS, DOS
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, APL
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Maximum On-Line Storage: 16G bytes
Maximum I/O Ports: 32
Communications Protocols: HDLC, Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Third-party
(See Vendor Profile Page V-13)

MAGNUSON COMPUTER SYSTEMS, INC.
M80/30
Word Length: 32-bit
Operating System: DOS/VS, VM MVS, DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Maximum On-Line Storage: 16G bytes
Maximum I/O Ports: 32
Communications Protocols: HDLC, Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $94,000
Maintenance: On-site, Third-party
Date First Installed: August 1981
Number Installed to Date: 10 — 50

MAGNUSON COMPUTER SYSTEMS, INC.
M80/31
Word Length: 32-bit
Operating System: DOS/VS, VM, MVS, DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Maximum On-Line Storage: 16G bytes
Maximum I/O Ports: 32
Communications Protocols: HDLC, Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $150,000
Maintenance: On-site, Third-party
Date First Installed: June 1980
Number Installed to Date: 50 — 100

MAGNUSON COMPUTER SYSTEMS, INC.
M80/32
Word Length: 32-bit
Operating System: DOS/VS, VM, MVS, DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Maximum On-Line Storage: 16G bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $114,000
Maintenance: On-site, Third-party
Date First Installed: June 1980
Number Installed to Date: 100 — 500

MAGNUSON COMPUTER SYSTEMS, INC.
M80/41
Word Length: 32-bit
Operating System: DOS/VS, VM, MVS, DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 16G bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $196,000
Maintenance: On-site, Third-party
Date First Installed: June 1982

MAGNUSON COMPUTER SYSTEMS, INC.
M80/42
Word Length: 32-bit
Operating System: DOS/VS, VM, MVS, DOS
Languages Supported: Cobol
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 16G bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $324,000
Maintenance: On-site, Third-party
Date First Installed: March 1981
Number Installed to Date: 50 — 100

MAGNUSON COMPUTER SYSTEMS, INC.
M80/43
Word Length: 32-bit
Operating System: DOS/VS, VM, MVS, DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 16G bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $384,000
Maintenance: On-site, Third-party
Date First Installed: March 1981
Number Installed to Date: 50 — 100

MODUTEST SYSTEMS, INC.
MARK 8
Word Length: 32-bit
Operating System: XEROX CPR, CPR
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 256
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $700,000
Maintenance: Third-party
Date First Installed: December 1979
Number Installed to Date: Less than 10
(See Vendor Profile Page V-14)

NANODATA COMPUTER CORP.
QM-1
Maximum Memory: 2M bytes
Multiple Users: Yes, 63
Maximum On-Line Storage: 30.7G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $400,000 to $700,000
Maintenance: On-site
Average Maintenance Fee: $2,550
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-14)

NATIONAL ADVANCED SYSTEMS, INC.
AS/1100
Specific Application: DDP
Word Length: 32-bit
Operating System: VM
Languages Supported: Cobol
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Maximum On-Line Storage: 3.2G bytes
Communications Protocols: Synchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $160,000
Maintenance: Remote diagnostics
Date First Installed: December 1982
(See Vendor Profile Page V-14)

NATIONAL ADVANCED SYSTEMS, INC.
AS/3000
Word Length: 32-bit
Operating System: MVS, SVS, VM/370, VS/1
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $470,000
Maintenance: On-site
Average Maintenance Fee: $1,800
Date First Installed: January 1980
Number Installed to Date: 10 — 50

NATIONAL ADVANCED SYSTEMS, INC.
AS/3000N
Word Length: 32-bit
Operating System: DOS/VS, OS/VS1, VM/370, DOS
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 2M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $325,000
Maintenance: On-site
Average Maintenance Fee: $1,500
Date First Installed: January 1980

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dataserv

Mainframes

NATIONAL ADVANCED SYSTEMS, INC.
AS/5000
Word Length: 64-bit
Operating System: MVS/MVS-SE, VM/370, SVS, VS/1
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $575,000
Maintenance: On-site
Average Maintenance Fee: $2,500
Date First Installed: February 1980
Number Installed to Date: 100 — 500

NATIONAL ADVANCED SYETEMS, INC.
AS/6130
Word Length: 32-bit
Operating System: MVS, SVS, VM/370, VS/1
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 4M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $1,095,000
Maintenance: On-site
Date First Installed: December 1982
Number Installed to Date: Less than 10

NATIONAL ADVANCED SYSTSMS, INC.
AS/6150
Word Length: 32-bit
Operating System: MVS, SVS, VM/370, VS/1
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 4M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $1,160,000
Maintenance: On-site
Date First Installed: March 1983

NATIONAL ADVANCSD SVETEMS, INC.
AS/7000
Word Length: 64-bit
Operating System: MVT, MFT
Languages Supported: Cobol, PL/1; Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 4M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,640,000
Maintenance: On-site
Average Maintenance Fee: $6,400
Date First Installed: April 1980
Number Installed to Date: 100 — 500

NATIONAL ADVANCED SVSTSMS, INC.
AS/7000 DPC
Word Length: 64-bit
Operating System: MVS/SP
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 4M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,400,000
Maintenance: On-site
Average Maintenance Fee: $8,200
Date First Installed: 1980
Number Installed to Date: 10 — 50

NATIONAL ADVANCED SVSTEMS, INC.
AS/7000N
Word Length: 64-bit
Operating System: QS/VS1, MVS/SP
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,100,000
Maintenance: On-site
Average Maintenance Fee: $5,500
Date First Installed: 1980
Number Installed to Date: 50 — 100

NATIONAL ADVANCED SYSTEMS, INC.
AS/8040
Word Length: 32-bit
Operating System: MVS/SP
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 8M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $1,300,000
Maintenance: On-site, Remote diagnostics

NATIONAL ADVANCED SYSTEMS, INC.
AS/8050
Word Length: 32-bit
Operating System: MVS/SP
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 8M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Communications Protocols: X.25, HDLC, Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $1,800,000
Maintenance: On-site, Remote diagnostics

NATIONAL ADVANCED SYETEME, INC.
AS/8060
Word Length: 32-bit
Operating System: MVS/SP
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 8M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $2,400,000
Maintenance: On-site, Remote diagnostics

NATIONAL ADVANCSD SYSTSMS, INC.
AS/9040
Word Length: 64-bit
Operating System: MVS, VM/370, MVS/SP
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 8M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Communications Protocols: Data Streaming
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,000,000
Maintenance: On-site
Date First Installed: 1982

NATIONAL ADVANCSD SYSTEMS, INC.
AS/9050
Word Length: 64-bit
Operating System: MVS, VM/370 MVS/SP
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 8M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Communications Protocols: Data Streaming
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,800,000
Maintenance: On-site
Date First Installed: 1982

NATIONAL ADVANCED SYSTEMS, INC.
AS/9060
Word Length: 64-bit
Operating System: MVS/SP2, VM/370, MVS, QS/VS1
Languages Supported: Cobol, Fortran, Assembly
Minimum Memory: 16M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Communications Protocols: Data Streaming
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,500,000
Maintenance: On-site
Date First Installed: December 1982
Number Installed to Date: Less than 10

NATIONAL ADVANCED SVETEMS, INC.
AS/9070
Word Length: 64-bit
Operating System: MVS, VM/370, MVS/SP1.2
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1
Minimum Memory: 16M bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Communications Protocols: Data Streaming
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,000,000
Maintenance: On-site
Date First Installed: 1981

NATIONAL ADVANCSD SYSTEMS, INC.
AS/9080
Word Length: 64-bit
Operating System: MVS/SP2, VM/370
Languages Supported: Cobol, Fortran, Assembly
Minimum Memory: 16M bytes
Maximum Memory: 64M bytes
Multiple Users: Yes
Communications Protocols: Data Streaming
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,200,000
Maintenance: On-site
Date First Installed: December 1982
Number Installed to Date: Less than 10

NCR CORP.
I-9040
Word Length: 32-bit
Operating System: IRX
Languages Supported: Cobol, Basic
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 2.6G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $120,000
Maintenance: On-site
Date First Installed: May 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-14)

NCR CORP.
I-9050
Word Length: 32-bit
Operating System: IRX
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 512K bytes
Maximum Memory: 3M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 2.6G bytes
Communications Protocols: Asynchronous
Distribution: End user

Vendor Sales Terms: Purchase; Rental
Purchase Price: $150,000
Maintenance: On-site, Remote diagnostics
Date First Installed: 1981
Number Installed to Date: 50 — 100

NCR CORP.
NCR 9300
Word Length: 32-bit
Operating System: ITX
Languages Supported: Cobol, Basic
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 42
Communications Protocols: SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $25,000 to$70,000
Maintenance: On-site

NCR CORP.
V-8535 II
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 1M bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $220,000
Maintenance: On-site, Remote diagnostics
Date First Installed: April 1982
Number Installed to Date: 10 — 50

NCR CORP.
V-8545 II
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 1M bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $315,000
Maintenance: On-site, Remote diagnostics
Date First Installed: April 1982

NCR CORP.
V-8555 II
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $400,000
Maintenance: On-site, Remote diagnostics
Date First Installed: April 1982
Number Installed to Date: 10 — 50

NCR CORP.
V-8565 II
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 2M bytes
Maximum Memory: 6M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $440,000
Maintenance: On-site, Remote diagnostics
Date First Installed: April 1982
Number Installed to Date: 10 — 50

NCR CORP.
V-8575 II
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 2M bytes
Maximum Memory: 6M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $514,000
Maintenance: On-site, Remote diagnostics
Date First Installed: May 1982
Number Installed to Date: 10 — 50

NCR CORP.
V-8585 II
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 2M bytes
Maximum Memory: 6M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $549,000
Maintenance: On-site, Remote diagnostics
Date First Installed: May 1982

NCR CORP.
V-8595 II
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 4M bytes
Maximum Memory: 6M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase Rental, Lease
Purchase Price: $690,000
Maintenance: On-site, Remote diagnostics
Date First Installed: May 1982
Number Installed to Date: 10 — 50

NCR CORP.
V-8635
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG,
Minimum Memory: 4M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $750,000
Maintenance: On-site, Remote diagnostics

NCR CORP.
V-8645
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 4M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase Rental, Lease
Purchase Price: $1,000,000
Maintenance: On-site, Remote diagnostics

NCR CORP.
V-8655
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 8M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Remote diagnostics

NCR CORP.
V-8565
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 8M bytes
Maximum Memory: 24M bytes
Multiple Users: Yes

NCR CORP.
V-8675
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 8M bytes
Maximum Memory: 32M bytes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Remote diagnostics

NCR CORP.
V-8685
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 12M bytes
Maximum Memory: 48M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Remote diagnostics

NCR CORP.
V-8695
Word Length: 32-bit
Operating System: VRX
Languages Supported: Cobol, Fortran, Basic, RPG, Neat
Minimum Memory: 16M bytes
Maximum Memory: 64M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Remote diagnostics

NIXDORF COMPUTER CORP.
8890 MODEL 30
Word Length: 32-bit
Operating System: NIDOS/VSE,

TO COMPUTER SYSTEMS/A-11

Mainframes

VM/370, DOS/VSE, OS/VS1
Languages Supported: Cobol, Fortran, Pascal, RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 10G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $120,000 to $225,000
Maintenance: On-site
Date First Installed: December 1980
(See Vendor Profile Page V-15)

NIXDORF COMPUTER CORP.
8890 MODEL 50
Word Length: 32-bit
Operating System: NIDOS/VSE, VM/370, DOS/VSE, OS/VS1
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 20G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $175,000 to $300,000
Maintenance: On-site

NIXDORF COMPUTER CORP.
8890 MODEL 70
Operating System: NIDOS/VSE, VM/370, DOS/VSE, OS/VS1
Languages Supported: Cobol, Fortran, RPG, APL
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Maximum On-Line Storage: 30G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $300,000 to $500,000
Maintenance: On-site

PARADYNE CORP.
RESPONSE
Word Length: 32-bit
Operating System: PARADYNE
Languages Supported: Cobol
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 5.6G bytes
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $120,900 to $429,000
Maintenance: On-site
Average Maintenance Fee: $980
Date First Installed: September 1981
(See Vendor Profile Page V-16)

SPERRY CORP.
1100/60
Word Length: 36-bit
Operating System: 1100 OS
Languages Supported: Cobol, Fortran, Basic, RPG, PL/1, Jovial, Assembler
Minimum Memory: 524K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 200M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $336,519 to $2,000,000
Maintenance: On-site
Date First Installed: 1980
(See Vendor Profile Page V-19)

SPERRY CORP.
1100/80 SERIES
Word Length: 36-bit
Operating System: 1100 OS
Languages Supported: Cobol, Fortran, Basic, RPG, PL/1, Assembler, Jovial
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Maximum On-Line Storage: 4G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,389,628 to $12,000,000
Average Maintenance Fee: $80,000
Date First Installed: 1977
Number Installed to Date: 300

SPERRY CORP.
1100/90 SERIES
Word Length: 36-bit
Operating System: 1100 OS
Languages Supported: Cobol, Fortran, Basic, RPG, PL/1, Assembler, Jovial
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 4G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,865,000
Maintenance: On-site
Date First Installed: July 1982

SUPERSET, INC.
PGM-2
Specific Application: CAD/CAM
Word Length: 48-bit
Languages Supported: Fortran
Minimum Memory: 393K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 3G bytes
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $35,000 to $75,000
Maintenance: On-site
Date First Installed: 1978
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-19)

SYNAPSE COMPUTER CORP.
SYNAPSE +1
Word Length: 32-bit
Operating System: SYNTHESIS
Languages Supported: Cobol, Pascal
Minimum Memory: 6M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 1,500
Maximum I/O Ports: 1,538
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $360,000 to $3,000,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $2,300
Date First Installed: December 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-19)

TELEFILE COMPUTER PRODUCTS, INC.
T85
Word Length: 32-bit
Operating System: TCP-V, TCP-R
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 32M bytes
Multiple Users: Yes, 200
Maximum On-Line Storage: 105G bytes
Maximum I/O Ports: 566
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $235,000
Maintenance: On-site
(See Vendor Profile Page V-20)

TELEFILE COMPUTER PRODUCTS, INC.
T90
Word Length: 32-bit
Operating System: TCP-V, TCP-R
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 32M bytes
Multiple Users: Yes, 200
Maximum On-Line Storage: 105G bytes
Maximum I/O Ports: 566
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $450,000
Maintenance: On-site

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ACCELERATED DATA SYSTEMS
100
Word Length: 32-bit
Operating System: MIPS
Languages Supported: Fortran; Basic, Pascal, Assembly
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 192M bytes
Maximum I/O Ports: 256
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $20,000 to $50,000
Maintenance: On-site
Average Maintenance Fee: $300
(See Vendor Profile Page V-1)

ACCELERATED DATA SYSTEMS
200
Word Length: 32-bit
Operating System: MIPS
Languages Supported: Fortran, Basic, Pascal, Assembly
Minimum Memory: 128K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 192M bytes
Maximum I/O Ports: 256
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25,000 to $100 000
Maintenance: On-site
Average Maintenance Fee: $500

ACCELERATED DAVA SYSTEMS
300
Word Length: 32-bit
Operating System: MIPS
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 192M bytes
Maximum I/O Ports: 256
Communication's Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $35,000 to $120,000
Maintenance: On-site
Average Maintenance Fee: $600

ACCELERATED DATA SYSTEMS
400
Word Length: 32-bit
Operating System: MIPS
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 192M bytes
Maximum I/O Ports: 256
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Purchase Price: $60,000 to $120,000
Maintenance: On-site
Average Maintenance Fee: $1,200

APOLLO COMPUTER, INC.
DN300 DOMAIN PROCESSING SYSTEM
Word Length: 32-bit
Operating System: AEGIS, UNIX
Languages Supported: Fortran, Pascal, C
Multiple Users: Yes
Maximum On-Line Storage: 1.2M bytes
Communications Protocols: Bisynchronous
Distribution: OEM
Purchase Price: $15,000
Maintenance: Remote diagnostics, Third-party
Date First Installed: February 1983
(See Vendor Profile Page V-2)

APOLLO COMPUTER, INC.
DN400 DOMAIN PROCESSING SYSTEM
Word Length: 32-bit
Operating System: AEGIS UNIX
Languages Supported: Fortran, Pascal, C
Multiple Users: Yes
Maximum On-Line Storage: 300M bytes
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $40,000
Maintenance: Remote diagnostics, Third-party
Date First Installed: June 1982

APOLLO COMPUTER, INC.
DN420 DOMAIN PROCESSING SYSTEM
Specific Application: CAD/CAM, CAE, CASE
Word Length: 32-bit
Operating System: UNIX, AEGIS
Languages Supported: Fortran, Pascal, C
Multiple Users: Yes
Maximum On-Line Storage: 300M bytes
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $30,000
Maintenance: Remote diagnostics, Third-party
Date First Installed: June 1982

APOLLO COMPUTER, INC.
DN800 DOMAIN PROCESSING SYSTEM
Specific Application: CAD/CAM; CAE, CASE
Word Length: 32-bit
Operating System: AEGIS, UNIX
Languages Supported: Fortran, Pascal, C
Multiple Users: Yes
Maximum On-Line Storage: 300M bytes
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $60,000
Maintenance: Remote diagnostics, Third-party
Date First Installed: August 1982
Number Installed to Date: 1,000 — 5,000
Maintenance: On-site
Average Maintenance Fee: $1,200

APPLIED DIGITAL DATA SYSTEMS, INC.
4000 SERIES
Word Length: 16-bit
Operating System: PICK, VMOS
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 300M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $39 000 to $74,500
Maintenance: Third-party
Average Maintenance Fee: $355
Date First Installed: August 1981
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-2)

APPLIED DIGITAL DAVA SYSTEMS, INC.
5080 SERIES
Word Length: 16-bit
Operating System: PICK VMOS
Languages Supported: Basic
Minimum Memory: 300K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $65,000 to $109 000
Maintenance: Third-party
Average Maintenance Fee: $700
Date First Installed: January 1983
Number Installed to Date: Less than 10

APPLIED DIGITAL DATA SYSTEMS, INC.
MENTOR 3000 SERIES
Word Length: 16-bit
Operating System: PICK, VMOS
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $24,900 to $36,000
Maintenance: Third-party
Average Maintenance Fee: $230
Date First Installed: January 1983
Number Installed to Date: 9

AURAGEN SYSTEMS CORP.
AURAGEN SYS 4000
Word Length: 32-bit
Operating System: AUROS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 2M bytes
Multiple Users: Yes
Communications Protocols: X.25, Asynchronous, Synchronous, HDLC, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $138,000 to $3,000,000
Maintenance: On-site, Remote diagnostics
(See Vendor Profile Page V-2)

BRAEGEN CORP.
8400 SERIES
Word Length: 16-bit
Operating System: MS-DOS; MP/M 86, CP/M 86
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 16
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA, RS232
Distribution: End user
Vendor Sales Terms: Purchase, Rental lease
Purchase Price: $8,100 to $30,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: April 1983
Number Installed to Date: Less than 10
(See Vendor Profile Page V-3)

BTI COMPUTERS
BTI 8000
Word Length: 32-bit
Operating System: BTI
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 5M bytes
Multiple Users: Yes 250
Maximum On-Line Storage: 8G bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $105,000 to $250 000
Maintenance: On-site, Remote diagnostics
Date First Installed: June 1980
Number Installed to Date: 60
(See Vendor Profile Page V-3)

CHARLES RIVER DAVA SYSTEMS, INC.
UNIVERSE 68
Specific Application: General purpose
Word Length: 32-bit
Operating System: UNOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 256K bytes
Maximum Memory: 12M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $11,000 to $40,000
Maintenance: Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $200
Date First Installed: October 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-4)

COMPUGRAPHIC CORP.
ONE/116
Specific Application: Typesetting
Word Length: 16-bit
Minimum Memory: 128K bytes

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Maximum Memory: 128K bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 12
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $45,000 to $110,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $750
Date First Installed: May 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-5)

COMPUGRAPHIC CORP.
ONE/116
Specific Application: Typesetting
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 33.1M bytes
Maximum I/O Ports: 12
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $60,000 to $150,000
Maintenance: On-site
Average Maintenance Fee: $900
Date First Installed: 1980
Number Installed to Date: 100 — 500

COMPUGRAPHIC CORP.
ONE/132
Specific Application: Typesetting
Word Length: 16-bit
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 65M bytes
Maximum I/O Ports: 12
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $75,000 to $200,000
Maintenance: On-site; Third-party
Average Maintenance Fee: $1,250
Date First Installed: March 1983

COMPUGRAPHIC CORP.
ONE/180
Specific Application: Typesetting
Word Length: 16-bit
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 151M bytes
Maximum I/O Ports: 12
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $100,000 to $300,000
Maintenance: On-site
Average Maintenance Fee: $1,750
Date First Installed: 1950
Number Installed to Date: 100 — 500

COMPUTER CONSOLES, INC.
POWER 5/55
Word Length: 16-bit
Operating System: PERPOS
Languages Supported: Cobol, Fortran, Basic, C
Multiple Users: Yes
Maximum On-Line Storage: 19.2G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $202,000
(See Vendor Profile Page V-5)

COMPUTER TALK, INC.
MODEL 400
Specific Application: Graphics
Word Length: 16-bit
Languages Supported: Basic, Assembly
Minimum Memory: 18K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $56,000 to $400,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: June 1975
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-6)

DATA GENERAL CORP.
ECLIPSE MV/4000
Word Length: 32-bit
Operating System: AOS/RT32, AOS/VS
Languages Supported: Cobol; Fortran; Basic, Pascal, RPG, APL, PL/1, C, DG/L
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 5G bytes
Communications Protocols: X.25, Asynchronous, Synchronous, HDLC, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user; OEM
Vendor Sales Terms: Purchase; Lease
Purchase Price: $28,000 to $80,000
Maintenance: On-site
Average Maintenance Fee: $380
Date First Installed: 1983
(See Vendor Profile Page V-7)

DATA GENERAL CORP.
ECLIPSE MV/6000
Word Length: 32-bit
Operating System: AOS/VS, AOS/RT32
Languages Supported: Cobol; Fortran, Basic; RPG, APL, PL/1
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 6G bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA, X.25, RJE80
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $75,000 to $110,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $450
Date First Installed: 1982

DATA GENERAL CORP.
ECLIPSE MV/8000
Word Length: 32-bit
Operating System: AOS/VS, AOS/RT32
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1, MPL DG/L
Minimum Memory: 1M byte
Maximum Memory: 12M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 10G bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA, X.25, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $185,000 to $245,000
Maintenance: On-site
Average Maintenance Fee: $1,200
Date First Installed: 1980

DATA GENERAL CORP.
ECLIPSE MV/10000
Word Length: 32-bit
Operating System: AOS/VS, AOS/RT32
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1, C
Minimum Memory: 1M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 192
Maximum On-Line Storage: 19G bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA, X.25, RJE 80
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Maintenance: On-site
Date First Installed: 1982

DIGITAL EQUIPMENT CORP.
VAX 11/730
Word Length: 32-bit
Operating System: VMS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, Bliss, C
Minimum Memory: 1M bytes
Maximum Memory: 5M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $49,000 to $120,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $400
Date First Installed: 1982
(See Vendor Profile Page V-8)

DIGITAL EQUIPMENT CORP.
VAX 11/750
Word Length: 32-bit
Operating System: VMS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, Bliss, C
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Distribution: End user; OEM
Vendor Sales Terms: Purchase
Purchase Price: $85,000 to $250,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $700
Date First Installed: 1980

DIGITAL EQUIPMENT CORP.
VAX 11/780
Operating System: VMS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, Bliss, C
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Vendor Sales Terms: Purchase
Purchase Price: $190,000 to $400,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $1,100
Date First Installed: May 1978

DIGITAL EQUIPMENT CORP.
VAX 11/782
Word Length: 32-bit
Operating System: VMS
Languages Supported: Cobol Fortran, Basic, Pascal, PL/1, Bliss, C
Minimum Memory: 1M bytes
Maximum Memory: 12M bytes
Multiple Users: Yes
Distribution: End user; OEM
Vendor Sales Terms: Purchase
Purchase Price: $400,000 to $650,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $2,100
Date First Installed: 1982

FORMATION, INC.
F4000/100
Word Length: 32-bit
Operating System: DOS, DOS/VSE, DOS/VS, MVS
Languages Supported: Cobol; Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 100
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 124
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $71,500 to $250,000
Maintenance: On-site
Average Maintenance Fee: $990
Date First Installed: August 1981
Number Installed to Date: 6
(See Vendor Profile Page V-9)

FORMATION, INC.
F4000/161
Word Length: 32-bit
Operating System: DOS, OS/VSI: DOS/VSE, MVS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1; C
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 100
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 124
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $71,500 to $250,000

Maintenance: On-site
Average Maintenance Fee: $990
Date First Installed: August 1981
Number Installed to Date: 8

FORMATION, INC.
F4000/200
Word Length: 32-bit
Operating System: DOS, DOS/VS, OS/VSI ZM, DOS/VSE, VM/SP, MVS
Languages Supported: Cobol, Fortran, Basic, Pascal APL, PL/1, C
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 100
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 124
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $100,000 to $250,000
Maintenance: On-site
Average Maintenance Fee: $990

FORMATION, INC.
F4000/201
Word Length: 32-bit
Operating System: DOS, OS/VI ZM, DOS/VSE, VM/SP
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 100
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 124
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $100,000 to $250,000
Maintenance: On-site
Average Maintenance Fee: $990
Number Installed to Date: 6

FORMATION, INC.
F4000/300
Word Length: 32-bit
Operating System: DOS, ZM, DOS/VSE, VM/SP
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1; C
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 100
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 124
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $120,000 to $300,000
Maintenance: On-site
Average Maintenance Fee: $1,155

FORMATION, INC.
F4000/301
Word Length: 32-bit
Operating System: DOS, OS/VSI; DOS/VSE, VM/SP
Languages Supported: Cobol; Fortran, Basic, Pascal, APL, PL/1; C
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 100
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 124
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $120,000 to $300,000
Maintenance: On-site
Average Maintenance Fee: $1,155

FOUR-PHASE SYSTEMS, INC.
SYSTEM 700
Word Length: 24-bit
Languages Supported: Cobol; Basic, Pascal, Assembler, Vision
Minimum Memory: 1.5M bytes
Maximum Memory: 3M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $218,000
Maintenance: On-site
Average Maintenance Fee: $1,600
(See Vendor Profile Page V-10)

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/80
Word Length: 24-bit
Languages Supported: Cobol; Assembler VISIO
Minimum Memory: 288K bytes
Maximum Memory: 864K bytes
Multiple Users: Yes
Maximum On-Line Storage: 83M bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $217,000
Maintenance: On-site
Average Maintenance Fee: $985

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/90
Word Length: 24-bit
Languages Supported: Cobol, Assembler VISIO
Minimum Memory: 192K bytes
Maximum Memory: 480K bytes
Multiple Users: Yes
Maximum On-Line Storage: 585M bytes
Communications Protocols: Asynchronous, Bisynchronous; SDLC, Hasp
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $166,000
Maintenance: On-site
Average Maintenance Fee: $805

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/95
Word Length: 24-bit
Languages Supported: Cobol; Assembler VISIO
Minimum Memory: 480K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes
Maximum On-Line Storage: 575M bytes
Communications Protocols: Asynchronous; Bisynchronous; SDLC, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $242,000
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $120,000 to $300,000
Maintenance: On-site
Average Maintenance Fee: $1,155

FOUR-PHASE SYSTEMS, INC.
SYSTEM 700
Word Length: 24-bit
Languages Supported: Cobol; Basic, Pascal, Assembler, Vision
Minimum Memory: 1.5M bytes
Maximum Memory: 3M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $218,000
Maintenance: On-site
Average Maintenance Fee: $1,600
(See Vendor Profile Page V-10)

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/80
Word Length: 24-bit
Languages Supported: Cobol; Assembler VISIO
Minimum Memory: 288K bytes
Maximum Memory: 864K bytes
Multiple Users: Yes
Maximum On-Line Storage: 83M bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $217,000
Maintenance: On-site
Average Maintenance Fee: $985

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/90
Word Length: 24-bit
Languages Supported: Cobol, Assembler VISIO
Minimum Memory: 192K bytes
Maximum Memory: 480K bytes
Multiple Users: Yes
Maximum On-Line Storage: 585M bytes
Communications Protocols: Asynchronous, Bisynchronous; SDLC, Hasp
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $166,000
Maintenance: On-site
Average Maintenance Fee: $805

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/95
Word Length: 24-bit
Languages Supported: Cobol; Assembler VISIO
Minimum Memory: 480K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes
Maximum On-Line Storage: 575M bytes
Communications Protocols: Asynchronous; Bisynchronous; SDLC, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $242,000
Maintenance: On-site
Average Maintenance Fee: $1,300

GOULD, INC.
32-2750
Word Length: 32-bit
Operating System: UNIX, MPX32
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Ada
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 38.4G bytes
Maximum I/O Ports: 122
Communications Protocols: Asynchronous, synchronous
Distribution: OEM
Vendor Sales Terms: Purchase; Lease
Purchase Price: $68,000 to $110,000
Maintenance: On-site
Average Maintenance Fee: $800
Date First Installed: June 1980
(See Vendor Profile Page V-10)

GOULD, INC.
3227
Word Length: 32-bit
Operating System: UNIX, MPX32
Languages Supported: Cobol, Fortran, Basic, Pascal, C; Ada
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 38.4G bytes
Maximum I/O Ports: 122
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $14,000 to $100,000
Maintenance: On-site
Average Maintenance Fee: $600
Date First Installed: June 1980

GOULD, INC.
3227 QUADRA SYTE
Word Length: 32-bit
Operating System: UNIX, MPX32
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Ada
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 38.4G bytes
Maximum I/O Ports: 122
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $14,000
Maintenance: On-site
Average Maintenance Fee: $112
Date First Installed: May 1980

GOULD, INC.
3287
Word Length: 32-bit
Operating System: UNIX, MPX32
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 38.4G bytes
Maximum I/O Ports: 122
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Maintenance: On-site
Date First Installed: February 1983

GOULD, INC.
32678/80
Word Length: 32-bit
Operating System: UNIX, MPX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Maintenance: On-site
Date First Installed: February 1983

GOULD, INC.
32778/0
Word Length: 32-bit
Operating System: UNIX, MPX32
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Ada
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 38.4G bytes
Maximum I/O Ports: 122
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $150,000 to $175,000
Maintenance: On-site
Average Maintenance Fee: $1,200
Date First Installed: 1975

HARRIS CORP.
HARRIS 300
Word Length: 48-bit
Operating System: VOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, Snobol
Minimum Memory: 768K bytes
Maximum Memory: 3M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 66G bytes
Communications Protocols: Asynchronous, Bisynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $80,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: 1981
(See Vendor Profile Page V-10)

HARRIS CORP.
HARRIS 700
Word Length: 48-bit
Operating System: VOS
Languages Supported: Cobol; Fortran, Basic, Pascal, RPG, APL; Snobol
Minimum Memory: 384K bytes
Maximum Memory: 6.1M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 66G bytes
Communications Protocols: Asynchronous, Bisynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $55,000

Superminis

Maintenance: On-site
Date First Installed: 1982

HARRIS CORP.
HARRIS 800
Word Length: 48-bit
Operating System: VOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, Snobol
Minimum Memory: 768K bytes
Maximum Memory: 6 1M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 86G bytes
Communications Protocols: X.25, Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $150,000
Maintenance: On-site
Date First Installed: 1981

HEWLETT-PACKARD CO.
HP 3000 SERIES 64
Word Length: 32-bit
Operating System: MPE
Languages Supported: RPG, Fortran, Cobol, Basic, Pascal, SPL
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 144
Maximum On-Line Storage: 6 4G bytes
Communications Protocols: Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $165,000
Maintenance: On-site
Date First Installed: 1981
(See Vendor Profile Page V-11)

HONEYWELL, INC.
6/92
Word Length: 32-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 2G bytes
Maximum I/O Ports: 82
Communications Protocols: Asynchronous, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $110,000
Maintenance: On-site
Average Maintenance Fee: $800
Date First Installed: 1981
(See Vendor Profile Page V-11)

HONEYWELL, INC.
6/94
Word Length: 32-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 1M bytes
Maximum Memory: 6M bytes
Multiple Users: Yes
Maximum On-Line Storage: 2G bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Maintenance: On-site
Date First Installed: 1981

HONEYWELL, INC.
6/96
Word Length: 32-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 1M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 112
Maximum On-Line Storage: 3G bytes
Communications Protocols: Asynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $130,000
Maintenance: On-site
Date First Installed: 1981

HONEYWELL, INC.
DPS 7/35
Word Length: 32-bit
Operating System: GCOS/BOS
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 1M bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 15
Maximum On-Line Storage: 2.5G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $94,000
Maintenance: On-site
Average Maintenance Fee: $385
Date First Installed: 1982

HONEYWELL, INC.
DPS 7/45
Word Length: 32-bit
Operating System: GCOS, GCOS/BOS
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 11G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $130,000
Maintenance: On-site
Average Maintenance Fee: $400
Date First Installed: 1982

HONEYWELL, INC.
DPS 7/55
Word Length: 32-bit
Operating System: GCOS, GCOS/BOS
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 2M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 16G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $200,000
Maintenance: On-site
Average Maintenance Fee: $500
Date First Installed: 1982

HONEYWELL, INC.
DPS 7/65
Word Length: 32-bit
Operating System: GCOS, GCOS/BOS
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 2M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 21G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $250,000
Maintenance: On-site
Average Maintenance Fee: $700
Date First Installed: 1982

IBM
4321
Word Length: 32-bit
Operating System: DOS/VSE
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, RPG, APL
Minimum Memory: 1M bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $100,000
Maintenance: On-site
Date First Installed: March 1983
(See Vendor Profile Page V-11)

ILENE INDUSTRIES DATA SYSTEMS, INC.
9000
Word Length: 32-bit
Operating System: CPS, AOS
Languages Supported: Cobol, Fortran, Basic, APL
Minimum Memory: 1M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 256
Maximum On-Line Storage: 4G bytes
Maximum I/O Ports: 96
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25
Distribution: End user, OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $250,000 to $2,500,000
Maintenance: On-site, Western Computer Co
Date First Installed: January 1983
Number Installed to Date: 2
(See Vendor Profile Page V-11)

INCOMNET
C4X
Word Length: 16-bit
Operating System: DCOS
Languages Supported: Pascal, C, Ada
Minimum Memory: 128K bytes
Maximum Memory: 3M bytes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: June 1983
(See Vendor Profile Page V-11)

INCOMNET
LOTUS ADVANCED
Word Length: 16-bit
Operating System: DCOS
Languages Supported: Pascal, C, Ada
Minimum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $50,000 to $102,000
Maintenance: Third-party
Date First Installed: June 1983

INCOMNET
LOTUS BASIC
Word Length: 16-bit
Operating System: DCOS
Languages Supported: Pascal, C, Ada
Minimum Memory: 128K bytes
Maximum Memory: 3M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $20,000
Maintenance: Third-party
Date First Installed: June 1983

INCOMNET
LOTUS EXECUTIVE
Word Length: 16-bit
Operating System: DCOS
Languages Supported: Pascal, C, Ada
Minimum Memory: 128K bytes
Maximum Memory: 3M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $20,000
Maintenance: Third-party
Date First Installed: June 1983

INFOREX, INC.
INFOREX 9000
Specific Application: Data Entry File Management
Word Length: 8-bit
Operating System: DOS
Languages Supported: Cobol
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 180M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user

Four-Phase introduces The Series 2000...

...for people who th... automating their office wa...

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You'll hear that a lot when you make the Series 2000 your first step into automating your office. And it's a pretty economical step, too. But that's the beauty of the new Motorola microprocessor-based Series 2000 system from Four-Phase. It's three different, integrated systems that let you start small with 8/16-bit computers like the one in our picture, then move into more powerful MC68000-based 16/32-bit machines later on. They're ideal for automating a single office, or connecting all your regional or branch offices together. And the systems are so easy to install and use, you can celebrate your first day of automation the same day your system arrives.

So what do you get for your investment? The entry level System 220 features the powerful 6809E microprocessor and gives you up to four easy-to-use workstations. The ISOS operating system inside lets you run a wide variety of business applications such as order entry, inventory inquiry, text editing and electronic worksheet. Getting started couldn't be easier.

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MOTOROLA INC.
Information Systems Group

Four-Phase Systems
The Office Automation Company

Superminis

Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $50,660 to $105,210
Maintenance: On-site
Average Maintenance Fee: $685
Date First Installed: July 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-11)

MEGA/NET CORP.
MEGA/NET 1000
Word Length: 32-bit
Operating System: ACOS
Languages Supported: Basic
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 500M bytes
Maximum I/O Ports: 128
Communications Protocols: X.25
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $68,000 to $90,000
Maintenance: On-site, Remote diagnostics
Date First Installed: June 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-13)

MEGA/NET CORP.
MEGA/NET 2000
Word Length: 32-bit
Operating System: ACOS
Languages Supported: Basic
Minimum Memory: 512K bytes
Maximum Memory: 6M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 2G bytes
Maximum I/O Ports: 128
Communications Protocols: X.25
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $220,000
Maintenance: On-site, Remote diagnostics
Date First Installed: June 1982
Number Installed to Date: Less than 10

MEGA/NET CORP.
MEGA/NET 3000
Word Length: 32-bit
Operating System: ACOS
Languages Supported: Basic
Minimum Memory: 512K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 8G bytes
Maximum I/O Ports: 128
Communications Protocols: X.25
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $500,000
Maintenance: On-site, Remote diagnostics
Date First Installed: June 1982
Number Installed to Date: Less than 10

MODULAR COMPUTER SYSTEMS, INC. (MODCOMP)
CLASSIC II/86
Word Length: 16-bit
Operating System: MAX IV 05
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, Coral
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site, Remote diagnostics, Return to manufacturing facilty
Date First Installed: June 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-14)

MODULAR COMPUTER SYSTEMS, INC. (MODCOMP)
CLASSIC II/75
Word Length: 16-bit
Operating System: MAX IV 05
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, Coral
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $97,200 to $450,290
Maintenance: On-site, Remote diagnostics, Return to manufacturing facilty
Date First Installed: June 1982
Number Installed to Date: 100 — 500

NORSK DATA NORTH AMERICAN, INC.
ND-520
Word Length: 32-bit
Operating System: SINTRAN III/VSE
Languages Supported: Cobol, Fortran, Pascal, RPG, Simula
Minimum Memory: 768K bytes
Maximum Memory: 2.2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 4.3G bytes
Maximum I/O Ports: 8
Communications Protocols: X.25, X.21,ND-NET
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Maintenance: On-site; Return to manufacturing facility
Date First Installed: 1979
(See Vendor Profile Page V-15)

NORSK DATA NORTH AMERICAN, INC.
ND-540
Word Length: 32-bit
Operating System: SINTRAN III/VSE
Languages Supported: Cobol, Fortran, Pascal, RPG, Simula
Minimum Memory: 768K bytes
Maximum Memory: 2.2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 4.3G bytes
Maximum I/O Ports: 6
Communications Protocols: X.25, HDLC, X.21
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1979

NORSK DATA NORTH AMERICAN, INC.
ND-560
Operating System: SINTRAN III/VSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, Simula
Minimum Memory: 750K bytes
Maximum Memory: 7.2M bytes
Maximum On-Line Storage: 4.3G bytes
Maximum I/O Ports: 12
Communications Protocols: X.25, X21
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1979

PERKIN-ELMER CORP.
3200 MPS
Word Length: 32-bit
Operating System: OS/32, UNIX 7
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, Coral
Mitimum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 130G bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Purchase Price: $15,000 to $500,000
Maintenance: On-site, Remote diagnostics
(See Vendor Profile Page V-16)

PERKIN-ELMER CORP.
3210
Word Length: 32-bit
Operating System: OS/32, UNIX 7
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, Coral
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 130G bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC, Hasp
Distribution: End user
Purchase Price: $25,000 to $100,000
Date First Installed: September 1981
Number Installed to Date: 5,000

PERKIN-ELMER CORP.
3210/A
Word Length: 32-bit
Operating System: OS/32, UNIX 7
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, Coral
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 130G bytes
Communications Protocols: Asynchronous, Bisynchronous; SDLC, Hasp
Distribution: OEM
Purchase Price: $42,000 to $200,000
Date First Installed: October 1981

PERKIN-ELMER CORP.
3230
Word Length: 32-bit
Operating System: OS/32, UNIX 7
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, Coral
Minimum Memory: 1M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 130G bytes
Communications Protocols: Asynchronous, Bisynchronous; SDLC, Hasp
Distribution: End user; OEM
Vendor Sales Terms: Purchase
Purchase Price: $70,000 to $200,000
Maintenance: On-site, Remote diagnostics
Date First Installed: February 1980

PERKIN-ELMER CORP.
3250
Word Length: 32-bit
Operating System: OS/32, UNIX 7
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, Coral
Minimum Memory: 2M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 130G bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $140,000 to $300,000
Maintenance: On-site, Remote diagnostics
Date First Installed: February 1981

PRIME COMPUTER, INC.
PRIME 250-II
Word Length: 32-bit
Operating System: PRIMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, PL/1; Assembly
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25, HDLC
Distribution: End user; Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $78,000 to $118,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $366
Date First Installed: February 1981
(See Vendor Profile Page V-17)

PRIME COMPUTER, INC.
PRIME 450-II
Word Length: 32-bit
Operating System: PRIMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, PL/1; Assembly, CPL

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129

Superminis

Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 63
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 12
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $112,000 to $187,000
Average Maintenance Fee: $946
Date First Installed: 1982

PRIME COMPUTER, INC.
PRIME 550-II
Word Length: 32-bit
Operating System: PRIMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, PL/1, Assembly
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 14
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25, HDLC
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $112,000 to $186,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $785
Date First Installed: February 1981

PRIME COMPUTER, INC.
PRIME 750
Word Length: 32-bit
Operating System: PRIMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, PL/1, Assembly
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 14
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25, HDLC
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $213,000 to $314,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $1,262
Date First Installed: 1979

PRIME COMPUTER, INC.
PRIME 850
Word Length: 32-bit
Operating System: PRIMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, PL/1, Assembly
Minimum Memory: 2M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 5G bytes
Maximum I/O Ports: 13
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25, HDLC
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $356,000 to $470,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $2,384
Date First Installed: June 1981

PRIME COMPUTER, INC.
PRIME 2250
Word Length: 32-bit
Operating System: PRIMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, PL/1, Assembly
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 632M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25, HDLC
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $39,900 to $62,900
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $304
Date First Installed: September 1982

PYRAMID TECHNOLOGY CORP.
PYRAMID COMPUTER
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Fortran, Pascal, C
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 1.5G bytes
Maximum I/O Ports: 128
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC/SNA, X.25
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $100,000 to $250,000
Maintenance: On-site
Average Maintenance Fee: $1,000
(See Vendor Profile Page V-17)

RIDGE COMPUTERS
RIDGE THIRTY-TWO
Specific Application: CAD
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Fortran, Pascal, PL/1
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 60
Maximum On-Line Storage: 154M bytes
Communications Protocols: Asynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $65,000
Maintenance: On-site
Average Maintenance Fee: $500
Date First Installed: August 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-18)

STRATUS COMPUTER
STRATUS 32
Word Length: 32-bit
Operating System: VOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Multiple Users: Yes
Maximum On-Line Storage: 4G bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Synchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $120,000 to $250,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $2,000
Date First Installed: February 1982
Number Installed to Date: 50
(See Vendor Profile Page V-19)

SYSCOM INTERNATIONAL
SYSCOM 3200
Word Length: 32-bit
Languages Supported: Cobol, SORC
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 512
Maximum On-Line Storage: 50G bytes
Maximum I/O Ports: 512
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $28,500 to $1,000,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $350
Date First Installed: June 1982
Number Installed to Date:
(See Vendor Profile Page V-19)

TANDEM COMPUTER, INC.
NON STOP
Word Length: 16-bit
Operating System: GUARDIAN OS
Languages Supported: Cobol, Fortran, Mumps, Tal
Multiple Users: Yes
Maximum I/O Ports: 208
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Purchase Price: $140,000
Maintenance: On-site
Date First Installed: May 1976
(See Vendor Profile Page V-20)

TANDEM COMPUTER, INC.
NON STOP II
Word Length: 16-bit
Operating System: GUARDIAN OS
Languages Supported: Cobol, Fortran, Mumps, Tal
Multiple Users: Yes
Maximum I/O Ports: 368
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $210,000
Maintenance: On-site
Date First Installed: January 1981
Number Installed to Date: 1,000 — 5,000

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The trouble with many of today's better known small business computers is they box you into a *single user system.* So after your big initial investment, you still have a single user system. You always will.

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...**because** standard programs are better than non-standard programs.

OUR SPECS AT A GLANCE:

CPU: 280A
Ram Memory: 64KB/user
Max. Memory: 320KB
No. of users: 1 to 4
Std. Serial Ports: 2/user, 2/master
Opt. Parallel Ports: 1/4-users, 1/master
Winchester disk storage: 6-19MB
Backup facilities: 250KB floppy
Opt. backup facilities: 1MB floppy
File interchange capability: 250KB, 8" floppy

Other features:
Real time clock (opt.)
Ht./Wd./Dp.: 8 x 13 x 15"
Wt.: 25 lbs.
Cooling: Convection
Oper. temp.: 16-38°C.
Storage temp.: -40-71°C.
Rel. Hum.: 10-80%
Alt.: 10,000 ft.
Domest. volt.: 115v 60hz
Intl. volt.: 230v 50/60hz
Amp.: 0.5-1A
Power: 75 VA

AKI, INC.
4000
Mini
Word Length: 16-bit
Operating System: ATEX
Languages Supported: Pascal, C
Minimum Memory: 1M bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 320M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $250,000
Maintenance: On-site
Average Maintenance Fee: $2,500
Date First Installed: 1975
(See Vendor Profile Page V-1)

AKI, INC.
ATEX 8000
Mini
Word Length: 16-bit
Operating System: ATEX
Languages Supported: Pascal, C
Minimum Memory: 1M bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $250,000 to $1,000,000
Maintenance: On-site
Date First Installed: 1975
Number Installed to Date: 10,000 — 50,000

ALCYON, INC.
A68KPM
Small business
Word Length: 16-bit
Operating System: REGULUS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 430M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Purchase Price: $3,000 to $33,000
Maintenance: On-site
(See Vendor Profile Page V-1)

ALPHA MICROSYSTEMS, INC.
AM-1000
Mini
Word Length: 16-bit
Operating System: AMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 7
Maximum On-Line Storage: 30M bytes
Communications Protocols: Asynchronous, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9,600 to $35,000
Maintenance: Alpha Serve
Date First Installed: August 1982
(See Vendor Profile Page V-1)

ALPHA MICROSYSTEMS, INC.
AM-1022
Mini
Word Length: 16-bit
Operating System: AMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 128K bytes
Multiple Users: Yes, 12
Communications Protocols: Asynchronous, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $21,000
Maintenance: Alpha Serve
Date First Installed: August 1982
Number Installed to Date: 500 — 1,000

ALPHA MICROSYSTEMS, INC.
AM-1042
Mini
Word Length: 16-bit
Operating System: AMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 128K bytes
Multiple Users: Yes, 24
Communications Protocols: Asynchronous, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $26,000
Maintenance: Alpha Serve
Date First Installed: August 1982
Number Installed to Date: 500 — 1,000

ALPHA MICROSYSTEMS, INC.
AM-1062
Mini
Word Length: 16-bit
Operating System: AMOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 128K bytes
Multiple Users: Yes, 68
Communications Protocols: Asynchronous, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $32,000
Maintenance: Alpha Serve
Date First Installed: February 1982
Number Installed to Date: 500 — 1,000

ALSPA COMPUTER, INC.
ACI-2
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,000
Maintenance: On-site, Return to manufacturing facility, Distributors
Date First Installed: February 1982
(See Vendor Profile Page V-1)

AMF LOGIC SCIENCES, INC.
OPS 11
Mini
Specific Application: CAD/CAM Graphics
Word Length: 16-bit
Operating System: RMX86
Languages Supported: Fortran, Pascal, Assembler
Minimum Memory: 160K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $70,000
Maintenance: Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: 1979
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-1)

ANALOG DEVICES
MACSYM-2
Mini
Word Length: 16-bit
Operating System: XMAC
Languages Supported: MAC Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 12
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $12,000 to $30,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $250
Date First Installed: October 1978
Number Installed to Date: 2,000
(See Vendor Profile Page V-2)

ANALOG DEVICES
MACSYM-10
Mini
Specific Application: Process Control
Word Length: 16-bit
Operating System: XMAC
Languages Supported: MAC Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $12,000 to $30,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $220
Number Installed to Date: 2,000

ANALOG DEVICES
MACSYM-150
Mini
Specific Application: Process Control
Word Length: Dual 8-bit
Operating System: MP/M 86
Languages Supported: Cobol, Fortran, Basic, MAC Basic 3
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum I/O Ports: 12
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $6,500 to $18,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $150
Date First Installed: October 1982

ANALOG DEVICES
MACSYM-350
Mini
Specific Application: Process Control
Word Length: Dual 8-bit
Operating System: MP/M 86
Languages Supported: Cobol, Fortran, Basic, MAC Basic-3
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum I/O Ports: 12
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $6,500 to $18,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: October 1982

APPLIED DIGITAL DATA SYSTEMS, INC.
8-15
Small business
Word Length: 8-bit
Operating System: CP/M
Minimum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,195
Maintenance: NCR Corp.
Date First Installed: 1982
(See Vendor Profile Page V-2)

APPLIED DIGITAL DATA SYSTEMS, INC.
MULTIVISION II
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 48K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,200
Maintenance: NCR Corp.
Date First Installed: 1980

APPLIED DIGITAL DATA SYSTEMS, INC.
MULTIVISION III
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 48K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party

Minis/Small Business Computers

Vendor Sales Terms: Purchase
Purchase Price: $10,700
Maintenance: NCR Corp
Date First Installed: 1981

APPLIED DIGITAL DATA SYSTEMS, INC.
MULTIVISION 8-5
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 800K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,900
Maintenance: NCR Corp
Date First Installed: 1982

APPLIED TECHNOLOGY VENTURES, INC.
EPICURE 8000
Mini
Specific Application: Hospitality
Languages Supported: Assembler
Minimum Memory: 96K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 192M bytes
Communications Protocols: Asynchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $25,000 to $60,000
Maintenance: Dealer
Date First Installed: September 1982
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-2)

APPLIED TECHNOLOGY VENTURES, INC.
MODEL 250/XX
Mini
Word Length: 16-bit
Operating System: PICK
Languages Supported: Basic, Proc English
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 1.6G bytes
Communications Protocols: Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $40,000 to $90,000
Maintenance: On-site
Average Maintenance Fee: $600
Date First Installed: 1977
Number Installed to Date: 250

ARDENT COMPUTER PRODUCTS, INC.
ARDENT 1S
Mini
Word Length: 16-bit
Operating System: BLISS, MICOS, IRIS, BITS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 120M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,000
Maintenance: Third-party
Date First Installed: December 1982
(See Vendor Profile Page V-2)

ARDENT COMPUTER PRODUCTS, INC.
ARDENT 20
Mini
Word Length: 16-bit
Operating System: BLISS, MICOS, IRIS, BITS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $50,000
Maintenance: Third-party
Date First Installed: June 1981
Number Installed to Date: 100 — 500

ARDENT COMPUTER PRODUCTS, IRC.
ARDENT 40
Mini
Word Length: 16-bit
Operating System: BLISS, MICOS, IRIS, BITS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $14,000 to $60,000
Maintenance: Third-party
Date First Installed: June 1981
Number Installed to Date: 100 — 500

BBN COMPUTER CORP.
C/60
Mini
Word Length: 20-bit
Operating System: UNIX
Languages Supported: Fortran, C
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 600M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $50,000
Maintenance: On-site, Remote diagnostics
(See Vendor Profile Page V-3)

BBN COMPUTER CORP.
C/70
Mini
Word Length: 20-bits
Operating System: Unix
Languages Supported: Fortran, C
Minimum Memory: 2M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 1.2G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $83,000
Maintenance: On-site, Remote diagnostics

BTI COMPUTER SYSTEMS, INC.
BTI 5000
Mini
Word Length: 16-bit
Operating System: BTI
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 400M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $38,000 to $50,000
Maintenance: On-site, Remote diagnostics
Date First Installed: June 1978
Number Installed to Date: 3,500
(See Vendor Profile Page V-3)

BUDGET COMPUTER SYSTEMS
MICRO PLUS 8D
Small business
Word Length: 8/16-bit
Operating System: OASIS
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 400M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,000 to $25,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: August 1979
Number Installed to Date: 50
(See Vendor Profile Page V-3)

BUDGET COMPUTER SYSTEMS
MICRO PLUS 8T
Small business
Word Length: 8/16-bit
Operating System: TURBO DOS
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 400M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,000 to $25,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: August 1982
Number Installed to Date: 2

BUNKER RAMO IRFORMATION SYSTEMS
BR1600
Mini
Specific Application: OA
Word Length: 16/32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Ada
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 128
Communications Protocols: Asynchronous, Synchronous, Arpanet
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $40,000 to $5,000,000
Maintenance: On-site
Date First Installed: November 1981
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-3)

BURROUGHS CORP.
B20 SERIES
Small business
Word Length: 16-bit
Operating System: BTOS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 640K bytes
Multiple Users: Yes
Maximum On-Line Storage: 60M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $20,000
Maintenance: On-site
Date First Installed: 1982
(See Vendor Profile Page V-3)

BURROUGHS CORP.
B90 SERIES
Small business
Word Length: 8-bit
Operating System: MPL II, CMS/MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 47M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $8,350 to $30,000
Maintenance: On-site
Date First Installed: 1979
Number Installed to Date: 10,000 — 50,000

BURROUGHS CORP.
B93
Small business
Word Length: 8-bit
Operating System: CMS/MCP, MPL II

Minis/Small Business Computers

Languages Supported: Cobol, RPG, NDL
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 191M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $10,108 to $35,000
Maintenance: On-site
Date First Installed: 1981

BURROUGHS CORP.
B96
Small business
Word Length: 8-bit
Operating System: CMS
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 512K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes
Maximum On-Line Storage: 80M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $10,000 to $38,000
Date First Installed: 1983

BURROUGHS CORP.
B920
Small business
Word Length: 64-bit
Operating System: CMS/MCP, SCP
Languages Supported: Cobol, RPG
Minimum Memory: 640K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes
Maximum On-Line Storage: 390M bytes
Maximum I/O Ports: 13
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $40,000 to $150,000
Maintenance: On-site
Date First Installed: 1980

BURROUGHS CORP.
B1905
Small business
Word Length: 24-bit
Operating System: CMS/MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 128K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 281M bytes
Maximum I/O Ports: 12
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $103,000
Maintenance: On-site
Date First Installed: April 1980
Number Installed to Date: 500 — 1,000

BURROUGHS CORP.
B1910
Small business
Word Length: 24-bit
Operating System: CMS/MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 281M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $91,350
Maintenance: On-site
Date First Installed: 1981

BURROUGHS CORP.
B1913
Small business
Word Length: 24-bit
Operating System: CMS/MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 281M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $122,750
Maintenance: On-site
Date First Installed: 1981

BURROUGHS CORP.
B1955
Small business
Word Length: 24-bit
Operating System: CMS/MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 8.4G bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $130,000
Maintenance: On-site
Date First Installed: 1980

BURROUGHS CORP.
B1985
Small business
Word Length: 24-bit
Operating System: CMS/MCP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 80
Maximum On-Line Storage: 6.4G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $156,400
Maintenance: On-site
Date First Installed: 1980

BYTRONIX CORP.
B550
Mini
Word Length: 16-bit
Operating System: IRIS, BLISS, BLISS/COBOL
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 192M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,490 to $6,970
Maintenance: Third-party
Date First Installed: 1977
(See Vendor Profile Page V-3)

BYTRONIX CORP.
MICRON 600
Mini
Word Length: 16-bit
Operating System: IRIS, BLISS/COBOL
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 192M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,500
Maintenance: Third-party
Date First Installed: 1983

BYTRONIX CORP.
SERIES 1000A
Mini
Word Length: 16-bit
Operating System: IRIS, BLISS/COBOL
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 384M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,710
Maintenance: Third-party
Date First Installed: 1978

BYTRONIX CORP.
SERIES 4000
Mini
Word Length: 16-bit
Operating System: IRIS, BLISS, COBOL
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 384M bytes

Minis/Small Business Computers

Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,570 to $9,785
Maintenance: Third-party
Date First Installed: 1980

BYTRONIX CORP.
SERIES 5000
Mini
Word Length: 16-bit
Operating System: IRIS, BLISS/COBOL
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 30
Maximum On-Line Storage: 384M bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $11,785 to $14,770
Maintenance: Third-party
Date First Installed: 1980

BYTRONIX CORP.
SERIES S 500
Mini
Word Length: 16-bit
Operating System: IRIS, BLISS/COBOL, BLISS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: OEM
Purchase Price: $6,070
Maintenance: Third-party
Date First Installed: 1977

CALIFORNIA COMPUTER SYSTEMS
CALSTAR
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 2.4M bytes
Maximum I/O Ports: 2
Communications Protocols: RS-232
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,995
Maintenance: On-site
Date First Installed: December 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-4)

CALIFORNIA COMPUTER SYSTEMS
MODEL 2310
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 2.4M bytes
Maximum I/O Ports: 6
Communications Protocols: RS-232
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000
Maintenance: On-site
Date First Installed: April 1980
Number Installed to Date: 500 — 1,000

CALIFORNIA COMPUTER SYSTEMS
SLIM-LINE 3000
Small business
Word Length: 8-bit
Operating System: CP/M, MP/M
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: RS-232
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,995
Maintenance: On-site
Date First Installed: December 1982
Number Installed to Date: 10 — 50

CALIFORNIA COMPUTER SYSTEMS
8YSTEM 300
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 2.4M bytes
Maximum I/O Ports: 8
Communications Protocols: RS-232
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000
Maintenance: On-site
Date First Installed: April 1980
Number Installed to Date: 500 — 1,000

CALIFORNIA COMPUTER SYSTEMS
SYSTEM 400
Small business
Word Length: 8-bit
Operating System: CP/M
Minimum Memory: 10K bytes
Maximum Memory: 40K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 2.4M bytes
Maximum I/O Ports: 6
Communications Protocols: RS-232
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,000
Maintenance: On-site
Date First Installed: April 1980
Number Installed to Date: 500 — 1,000

CENTRAL DATA CORP.
C-2000
Small business
Word Length: 16-bit
Operating System: UNIX, ZMOF, ZENIX
Languages Supported: Cobol, Basic
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Vendor Sales Terms: Purchase
Purchase Price: $6,500 to $12,000
Maintenance: On-site
Date First Installed: July 1983
(See Vendor Profile Page V-4)

CENTURION COMPUTER CORP.
MICRO PLUS SERIES
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: CPL
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 32M bytes
Maximum I/O Ports: 4
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $18,000
Maintenance: On-site
Date First Installed: 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-4)

CENTURION COMPUTER CORP.
SERIES 5200
Small business
Word Length: 8-bit
Operating System: CPU6
Languages Supported: CPL
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 32M bytes
Maximum I/O Ports: 7
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $21,000 to $25,000
Maintenance: On-site
Date First Installed: May 1982
Number Installed to Date: 2,000

CENTURION COMPUTER CORP.
SERIES 5300
Small business
Word Length: 8-bit
Operating System: CPU6
Languages Supported: CPL
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 32M bytes
Maximum I/O Ports: 7
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $20,000 to $25,000
Maintenance: On-site
Date First Installed: May 1982
Number Installed to Date: 500 — 1,000

CENTURION COMPUTER CORP.
SERIES 8000
Small business
Word Length: 16-bit
Operating System: CP/M
Languages Supported: CPL
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 96M bytes
Maximum I/O Ports: 12
Communications Protocols: Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $24,000 to $30,000
Maintenance: On-site
Date First Installed: January 1980
Number Installed to Date: 100 — 500

CENTURY COMPUTER CORP.
CC200
Small business
Word Length: 8-bit
Operating System: COS
Languages Supported: Cobol, Basic
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Vendor Sales Terms: Purchase
Purchase Price: $22,000
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $220
Date First Installed: March 1975
Number Installed to Date: 4,200
(See Vendor Profile Page V-4)

CENTURY COMPUTER CORP.
VANGUARD 8000
Small business
Word Length: 16-bit
Operating System: CP/M, MP/M, CP/M 86
Languages Supported: Cobol, Basic, Assembly
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 45
Maximum On-Line Storage: 50M bytes
Maximum I/O Ports: 12
Communications Protocols: Asynchronous, Bisynchronous
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $10,000
Maintenance: On-site, Return to manufacturing facility, Dealers
Average Maintenance Fee: $60
Date First Installed: October 1982
Number Installed to Date: 10 — 50

CHALLENGE SYSTEMS, INC.
CS-1000-B
Small business
Word Length: 8-bit
Operating System: CP/M 80, CP/NET, MP/M II, I/OS
Languages Supported: Basic, Pascal, RM Cobol, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 62M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, Telex
Distribution: OEM, Third-party

Vendor Sales Terms: Purchase
Purchase Price: $4 860 to $11 500
Maintenance: Return to manufacturing facility Third-party
Date First Installed: January 1983
Number Installed to Date: 250
(See Vendor Profile Page V-4)

CHALLENGE SYSTEMS, INC.
CS-1000-E
Small business
Word Length: 8-bit
Operating System: CP/M I/OS CP/M MP/M II
Languages Supported: Basic, Pascal RM Cobol Assembler
Minimum Memory: 128K bytes
Maximum Memory: 384K bytes
Multiple Users: Yes 3
Maximum On-Line Storage: 62M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous Synchronous, Bisynchronous, Telex
Distribution: OEM Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5 500 to $17 000
Maintenance: Return to manufacturing facility Third-party
Date First Installed: January 1983
Number Installed to Date: 250

CIE SYSTEMS, INC.
680/20
Small business
Word Length: 16/32-bit
Operating System: REGULUS UNIX RM/COS SMC/BASIC
Languages Supported: Cobol Fortran Basic Pascal C
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes 4
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site Third-party
Date First Installed: January 1983
(See Vendor Profile Page V-4)

CIE SYSTEMS, INC.
680/30
Small business
Word Length: 16/32-bit
Operating System: REGULUS UNIX RM/COS SMC/BASIC
Languages Supported: Cobol Fortran Basic Pascal C
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes 8
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous Synchronous Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site Third-party
Date First Installed: January 1983

CIE SYSTEMS, INC.
680/40
Small business
Word Length: 16/32-bit
Operating System: REGULUS UNIX RM/COS SMC/BASIC
Languages Supported: Cobol Fortran Basic Pascal C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 16
Maximum On-Line Storage: 336M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous Synchronous Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site Third-party
Date First Installed: January 1982

CMC INTERNATIONAL
SYSTEM 616 SUPER 5
Small business
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol Fortran Basic Pascal PL/1 C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 7M bytes
Maximum I/O Ports: 2
Communications Protocols: Synchronous Bisynchronous
Distribution: OEM Third-party
Vendor Sales Terms: Purchase
Maintenance: On-site
Date First Installed: November 1982
(See Vendor Profile Page V-4)

CMC INTERNATIONAL
SYSTEM 616-1
Small business
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol Fortran Basic Pascal PL/1 C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 700K bytes
Maximum I/O Ports: 2
Communications Protocols: Synchronous Bisynchronous
Distribution: OEM Third-party
Vendor Sales Terms: Purchase
Maintenance: On-site
Date First Installed: November 1982

CMC INTERNATIONAL
SYSTEM-816-2
Small business
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol Fortran Basic Pascal PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 1 5M bytes
Maximum I/O Ports: 2
Communications Protocols: Synchronous Bisynchronous
Distribution: OEM Third-party
Vendor Sales Terms: Purchase
Maintenance: On-site
Date First Installed: November 1982

COLONIAL DATA SERVICES CORP.
5880
Small business
Word Length: 8-bit
Operating System: CP/M DOS I/OS
Languages Supported: Cobol Fortran Basic Pascal APL PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous Bisynchronous SDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2 995 to $12 000
Maintenance: On-site
(See Vendor Profile Page V-4)

COLUMBIA DATA PRODUCTS, INC.
1600-1
Small business
Word Length: 16-bit
Operating System: CP/M 86 MS-DOS MP/M 86
Languages Supported: Cobol Fortran Basic Basic plus 2 Pascal
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 8
Maximum On-Line Storage: 640K bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2 000
Maintenance: On-site Return to manufacturing facility
Date First Installed: 19826
Number Installed to Date: 500 — 1 000
(See Vendor Profile Page V-4)

COLUMBIA DATA PRODUCTS, INC.
1600-2
Small business
Word Length: 16-bit
Operating System: CP/M 86 MS-DOS MP/M 86
Languages Supported: Cobol Fortran Basic Pascal
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 6
Maximum On-Line Storage: 5 3G bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4 400
Maintenance: On-site Return to manufacturing facility
Date First Installed: June 1982
Number Installed to Date: 500 — 1 000

COLUMBIA DATA PRODUCTS, INC.
1600-3
Small business
Word Length: 16-bit
Operating System: CP/M 86 MS-DOS MP/M 86
Languages Supported: Cobol Fortran Basic Pascal
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 8
Maximum On-Line Storage: 10 3M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5 000
Maintenance: On-site Return to manufacturing facility
Date First Installed: June 1982
Number Installed to Date: 500 — 1 000

COLUMBIA DATA PRODUCTS, INC.
DC-1000
Small business
Word Length: 8-bit
Operating System: CP/M MP/M 86
Minimum Memory: 64K bytes
Maximum Memory: 1 2M bytes
Multiple Users: Yes 16
Maximum On-Line Storage: 40 6G bytes
Communications Protocols: Asynchronous Synchronous
Distribution: Third-party
Purchase Price: $7 000
Maintenance: On-site Return to manufacturing facility
Date First Installed: June 1981
Number Installed to Date: 500 — 1 000

COMPUPRO CORP.
816/C
Small business
Word Length: 8 16
Operating System: CP/M MP/M
Languages Supported: PL/1 Cobol Fortran Basic Pascal Assembler
Minimum Memory: 384K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $8 995
Maintenance: On-site
(See Vendor Profile Page V-5)

COMPUTER AUTOMATION, INC.
DATACASE/5
Mini
Word Length: 16-bit
Operating System: CARTOS UNICA
Languages Supported: Cobol Fortran Basic
Minimum Memory: 256K bytes
Multiple Users: Yes 32
Maximum On-Line Storage: 10M bytes
Distribution: OEM
Vendor Sales Terms: Purchase Lease
Purchase Price: $13 675
Maintenance: On-site
Date First Installed: 1983
(See Vendor Profile Page V-5)

COMPUTER AUTOMATION, INC.
CARTOS SERIES 5
Mini
Word Length: 16-bit
Operating System: CARTOS
Languages Supported: Fortran Pascal
Minimum Memory: 256K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes 32
Maximum On-Line Storage: 6G bytes
Communications Protocols: Asynchronous Synchronous, Bisynchronous

Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $20,000 to $100,000
Date First Installed: June 1982
Number Installed to Date: 4

COMPUTER AUTOMATION, INC.
OMNIX
Mini
Word Length: 16-bit
Operating System: OPUS-1
Languages Supported: Trans. Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 2.4G bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous Bisynchronous
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $20,000
Date First Installed: June 1978
Number Installed to Date: 1,500

COMPUTER AUTOMATION, INC.
OS-4 SYSTEMS
Mini
Word Length: 16-bit
Operating System: OS4
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 2.4G bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Vendor Sales Terms: Purchase
Purchase Price: $4,500 to $70,000
Date First Installed: January 1978
Number Installed to Date: 10,000 — 50,000

COMPUTER AUTOMATION, INC.
UNIX SERIES S
Mini
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Fortran, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes
Maximum On-Line Storage: 6G bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,995 to $60,000
Date First Installed: March 1983

COMPUTER CONSOLES, INC.
POWER 5/20
Mini
Specific Application: Transaction Proccessng
Word Length: 16-bit
Operating System: PERPOS
Languages Supported: Cobol, Fortran, Basic, C
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 210M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $28,000
Maintenance: On-site
Date First Installed: July 1982
(See Vendor Profile Page V-5)

COMPUTER DESIGNED SYETEMS, INC.
ADVISOR 100
Mini
Word Length: 16/32-bit
Operating System: AVOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Abol
Minimum Memory: 64K bytes
Maximum Memory: 2K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 32M bytes
Maximum I/O Ports: 32
Communications Protocols: SDLC, Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000
Maintenance: On-site
Date First Installed: 1977
(See Vendor Profile Page V-5)

COMPUTER DESIGNED SYETEMS, INC.
ADVISOR 300
Mini
Word Length: 16/32-bit
Operating System: AVOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Abol
Minimum Memory: 64K bytes
Maximum Memory: 2K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 32
Communicatons Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $40,000
Maintenance: On-site
Date First Installed: 1978

COMPUTER DESIGNED SYETEMS, INC.
ADVISOR 600
Mini
Word Length: 16/32-bit
Operating System: AVOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Abol
Minimum Memory: 64K bytes
Maximum Memory: 2K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 280M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $60,000
Maintenance: On-site
Date First Installed: 1979

COMPUTER DESIGNED SYETEMS, INC.
ADVISOR 900
Mini
Word Length: 16/32-bit
Operating System: AVOS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 2.4G bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $100,000 to $250,000
Maintenance: On-site
Date First Installed: 1979

COMTEK, INC.
CM-2
Mini
Word Length: 8-bit
Operating System: CP/M, CDOS
Languages Supported: Cobol, Basic, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $23,000
Average Maintenance Fee: $230
Date First Installed: June 1980
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-6)

COMTEK, INC.
COMTEK CD-4
Mini
Word Length: 8-bit
Operating System: CP/M, CDOS
Languages Supported: Cobol, Basic, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 400K bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $17,000
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $170
Date First Installed: June 1978
Number Installed to Date: 50 — 100

CRC SYETEMS, INC.
CR80
Mini
Specific Application: Communications
Word Length: 16-bit
Operating System: XAMOS
Languages Supported: Cobol, Basic, Assembler
Minimum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 256
Communications Protocols: Asynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $25,000
Maintenance: On-site
Date First Installed: 1978
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-6)

CRC SYETEMS, INC.
CR801
Mini
Word Length: 16-bit
Operating System: XAMOS
Languages Supported: Cobol, Pascal, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, SDLC, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $25,000
Maintenance: On-site
Date First Installed: 1981
Number Installed to Date: 50 — 100

DATA GENERAL CORP.
CS100
Small business
Word Length: 16-bit
Operating System: RDOS
Languages Supported: Cobol, Fortran, Basic, Basic plus
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 50M bytes
Communications Protocols: Asynchronous, Synchronous, X.25
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $9,000 to $30,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $150
Date First Installed: May 1982
(See Vendor Profile Page V-7)

DATA GENERAL CORP.
CS200A
Small business
Word Length: 16-bit
Operating System: RDOS, AOS
Languages Supported: Cobol, Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 13
Maximum On-Line Storage: 628M bytes
Communications Protocols: Hasp, Asynchronous, Synchronous, X.25
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $13,000 to $54,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $250
Date First Installed: May 1982

DATA GENERAL CORP.
CS200B
Small business
Word Length: 16-bit

Operating System: RDOS; AOS
Languages Supported: Cobol, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 25
Maximum On-Line Storage: 1 4G bytes
Communications Protocols: Hasp, Asynchronous, Synchronous, X 25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $28,000 to $68,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $325
Date First Installed: May 1982

DATA GENERAL CORP.
CS200C
Small business
Word Length: 16-bit
Operating System: RDOS, AOS
Languages Supported: Cobol, Fortran, Basic, Basic plus
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 1 4G bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA, X 25, Hasp
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: February 1983

DATA GENERAL CORP.
ECLIPSE S/20
Mini
Word Length: 16-bit
Operating System: MP/AOS
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 200M bytes
Communications Protocols: Asynchronous, 3270
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $12,000
Maintenance: On-site
Average Maintenance Fee: $125
Date First Installed: June 1982

DATA GENERAL CORP.
ECLIPSE S/120
Mini
Word Length: 16-bit
Operating System: RDOS, AOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1 5G bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA, 3780/2780
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,000 to $18,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $150
Date First Installed: June 1982

DATA GENERAL CORP.
ECLIPSE S/130
Mini
Word Length: 16-bit
Operating System: AOS, RDOS
Languages Supported: Fortran, Basic, PL/1, Algol, Extended Basic
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 1.5G bytes
Communications Protocols: Bisynchronous, X 25
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $16,000
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: March 1977

DATA GENERAL CORP.
ECLIPSE S/140
Mini
Word Length: 16-bit
Operating System: MP/AOS, RDOS, AOS
Languages Supported: Fortran, Basic, Basic plus, Pascal, PL/1, Algol, DG/L
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 2G bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA, X 25, 3780/2780
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $20,000 to $37 000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $180
Date First Installed: March 1980

DATA GENERAL CORP.
ECLIPSE S/250
Mini
Word Length: 16-bit
Operating System: AOS, RDOS
Languages Supported: Fortran, Basic, PL/1, DG/L
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 2G bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $40 000 to $90,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $500
Date First Installed: November 1978

DATA GENERAL CORP.
ECLIPSE S/280
Mini
Word Length: 16-bit
Operating System: MP/AOS, RDOS, AOS
Languages Supported: Fortran, Basic, Basic plus, Pascal, PL/1, DG/L, Algol
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 1 4G bytes
Communications Protocols: SDLC/SNA, X 25
Distribution: End user, OEM
Vendor Sales Terms: Purchase, Rental
Maintenance: On-site, Remote diagnostics
Date First Installed: February 1953

DATA/MEDIA CORP.
832
Small business
Word Length: 8-bit
Operating System: PICK
Minimum Memory: 128K bytes
Maximum Memory: 1 6M bytes
Multiple Users: Yes, 14
Maximum On-Line Storage: 76M bytes
Maximum I/O Ports: 19
Communications Protocols: Asynchronous
Purchase Price: $20,000
Date First Installed: September 1982
(See Vendor Profile Page V-7)

DATAPOINT CORP.
6600
Small business
Word Length: 8-bit
Operating System: DOS, RMS
Languages Supported: Cobol, Basic plus, RPG, Datashare
Minimum Memory: 60K bytes
Maximum Memory: 248K bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 500M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $28 000 to $63 000
Maintenance: On-site
Date First Installed: July 1976
(See Vendor Profile Page V-7)

DATAPOINT CORP.
8600
Small business
Word Length: 8-bit
Operating System: DOS, RMS
Languages Supported: Cobol, RPG, Fortran, Basic plus, Databus, Datashare
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 100M bytes
Communications Protocols: Asynchronous, Synchronous Bisynchronous, SDLC, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $24 000 to $34,000
Maintenance: On-site
Average Maintenance Fee: $220
Date First Installed: February 1981
Number Installed to Date: 500 — 1,000

DATAPOINT CORP.
5800
Small business
Word Length: 16-bit
Operating System: RMS
Languages Supported: Cobol, Chain, Datashare
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 1G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $67,000
Maintenance: On-site
Average Maintenance Fee: $550
Date First Installed: May 1981
Number Installed to Date: 100 — 500

DATARAM CORP.
B23+
Mini
Word Length: 16-bit
Operating System: RSTS/E, RSX-11M, RSX-11M+, UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus 2
Minimum Memory: 256K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 600M bytes
Maximum I/O Ports: 4
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,355
Maintenance: Return to manufacturing facility
Date First Installed: 1981
(See Vendor Profile Page V-7)

DATARAM CORP.
M-23
Mini
Word Length: 16-bit
Operating System: RSTS/E, RSX-11M, RSX-11M+, UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 600M bytes
Maximum I/O Ports: 2
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9 400
Maintenance: Return to manufacturing facility
Date First Installed: 1982

DATARAM CORP.
W-23
Mini
Word Length: 16-bit
Operating System: RSTS/E, RSX-11M, UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, Coral
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum On-Line Storage: 600M bytes
Maximum I/O Ports: 2
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $12,750
Maintenance: Return to manufacturing facility
Date First Installed: 1982

DATA TERMINAL & COMMUNICATION
MICRO 210
Small business

Minis/Small Business Computers

Word Length: 8-bit
Operating System: CP/M
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,295 to $9,995
Maintenance: On-site
Average Maintenance Fee: $120
Date First Installed: 1981
Number Installed to Date: 2,000
(See Vendor Profile Page V-7)

DICOM, INC.
401E
Mini
Word Length: 16-bit
Operating System: RT11, RSX
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 65K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 200M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $15,000
Maintenance: Return to manufacturing facility
Date First Installed: October 1982
(See Vendor Profile Page V-8)

DIGIDYNE CORP.
$200/11
Mini
Word Length: 16-bit
Operating System: RDOS, MICOS, BITS
Languages Supported: Cobol, Fortran, Basic, Pascal, Bliss, Cobol
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,225 to $50,000
Maintenance: On-site
Average Maintenance Fee: $300
Date First Installed: March 1983
(See Vendor Profile Page V-8)

DIGIDYNE CORP.
$200/S
Mini
Word Length: 16-bit
Operating System: RDOS, MICOS, BITS
Languages Supported: Cobol, Fortran, Basic, Pascal, Bliss
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 240M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,125 to $20,000
Maintenance: On-site
Average Maintenance Fee: $200
Date First Installed: January 1983
Number Installed to Date: 50

DIGIDYNE CORP.
S832
Mini
Word Length: 16-bit
Operating System: RDOS, MICOS, BITS
Languages Supported: Cobol, Fortran, Basic, Pascal, Bliss
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,500 to $9,500
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: October 1981
Number Installed to Date: 100 — 500

DIGIDYNE CORP.
S864
Mini
Word Length: 16-bit
Operating System: RDOS, MICOS, BITS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $12,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: October 1981
Number Installed to Date: 500 — 1,000

DIGITAL EQUIPMENT CORP.
MICRO PDP11
Small business
Word Length: 16-bit
Operating System: RT11, OSM 11, RSTS/E, RSX-11M+
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, APL, Coral
Minimum Memory: 256K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 20M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $109
(See Vendor Profile Page V-8)

DIGITAL EQUIPMENT CORP.
PDP 11/23+
Small business
Word Length: 16-bit
Operating System: RSX-11M, RSX-11M+, RSTS/E, CTS 500
Languages Supported: Cobol, Fortran, Basic plus, Basic plus 2, Coral, Dibol
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user, OEM
Purchase Price: $21,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $245

DIGITAL EQUIPMENT CORP.
PDP 11/24
Small business
Word Length: 16-bit
Operating System: RT-11, RSTS/E, RSX-11M, CTS 300
Languages Supported: Basic plus, Coral, Fortran, Basic, Cobol, Basic plus 2
Minimum Memory: 128K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 968M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $32,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $430

DIGITAL EQUIPMENT CORP.
PDP 11/44
Mini
Word Length: 16-bit
Operating System: RSTS/E, CTS 500, RT11, RSX-11M
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, Coral
Minimum Memory: 256K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 3.6G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $55,000
Maintenance: On-site, Remote diagnostics
Average Maintenance Fee: $260
Date First Installed: 1980

DIGITAL EQUIPMENT CORP.
PROFESSIONAL 325
Small business
Word Length: 16-bit
Operating System: RSX-11M+
Languages Supported: Basic, Basic plus 2
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Maximum On-Line Storage: 800K bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,375
Maintenance: On-site
Average Maintenance Fee: $38

DIGITAL EQUIPMSNT CORP.
PROFESSIONAL 350
Small business
Word Length: 16-bit
Operating System: RSX-11M+
Languages Supported: Basic, Basic plus 2
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Maximum On-Line Storage: 5.8M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,375
Maintenance: On-site
Average Maintenance Fee: $38

DIGITAL EQUIPMENT CORP.
THE DECMATE II
Small business
Word Length: 8/12-bit
Special Applications: WP, Microcomputing
Operating System: WPS 8, CP/M, COS 310
Languages Supported: OIBOL
Minumum Memory: 96K bytes
Maximum Memory: 160K bytes
Maximum On-Line Storage: 6.6M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,000
Maintenance: On-site
Date First Installed: January 1983

DIGITAL SYSTEMS CORP.
GALAXY/3
Small business
Word Length: 8-bit
Operating System: GALAXY OS
Languages Supported: Cobol, Basic, RPG, PL/1, Assembler
Minimum Memory: 96K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 1.1G bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $28,000 to $90,000
Maintenance: On-site
Average Maintenance Fee: $414
Date First Installed: January 1980
(See Vendor Profile Page V-8)

DIGITAL SYSTSMS CORP.
GALAXY/8
Small business
Word Length: 8-bit
Operating System: GALAXY OS
Languages Supported: Cobol, Basic, PL/1, Assembler
Minimum Memory: 1M bytes
Multiple Users: Yes, 75
Maximum On-Line Storage: 2.4G bytes
Maximum I/O Ports: 60
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $40,000 to $125,000
Maintenance: On-site
Average Maintenance Fee: $781
Date First Installed: January 1976
Number Installed to Date: 22

DISPLAY DATA CORP.
INSIGHT 80
Small business
Word Length: 8-bit
Operating System: INSIGHT
Languages Supported: Insight
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 16
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $45,000 to $120 000
Maintenance: On-site
Date First Installed: January 1974
Number Installed to Date: 1 000 — 5 000
(See Vendor Profile Page V-8)

DISPLAY DATA CORP.
INSIGHT 8000
Small business
Word Length: 8-bit
Operating System: INSIGHT
Languages Supported: Insight
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 120M bytes
Maximum I/O Ports: 24
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $45 000 to $120 000
Maintenance: On-site
Date First Installed: May 1982

D & N MICRO PRODUCTS, INC.
D & N MICRO 65
Small business
Word Length: 8-bit
Operating System: DOS/65
Languages Supported: Basic, Assembly
Minimum Memory: 48K bytes, **Maximum Memory:** 200K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 74M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous
Distribution: End user, OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2 995 to $10 000
Maintenance: On-site, Third-party
Date First Installed: June 1982
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-8)

D & N MICRO PRODUCTS, INC.
D & N MICRO 80
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, Forth
Minimum Memory: 48K bytes
Maximum Memory: 750K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5 000
Maintenance: On-site
Date First Installed: December 1980
Number Installed to Date: 50 — 100

DOCUTEL OLIVETTI CORP.
S-6000
Small business
Word Length: 16-bit
Operating System: OMOS
Languages Supported: Fortran, Basic, Pascal, Lisp
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 360M bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $16 000 to $60 000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $280
Date First Installed: November 1982
(See Vendor Profile Page V-8)

DURANGO SYSTEMS, INC.
POPPY
Small business
Word Length: 16-bit
Operating System: MS-DOS, CP/M 86, MP/M 86
Languages Supported: Cobol, Basic, Pascal, PL/1
Minimum Memory: 128K bytes
Maximum Memory: 640K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user, OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5 000 to $9 000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Dow Jones
(See Vendor Profile Page V-8)

DURANGO SYSTEMS, INC.
POPPY II
Small business
Word Length: 16-bit
Operating System: ZENIX, MS-DOS, CP/M 86, MP/M 86
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 384K bytes
Maximum Memory: 1 1M bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 61M bytes
Maximum I/O Ports: 15
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user, OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $30 000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Dow Jones

DYNABYTE
MONARCH 6800
Small business
Word Length: 8/16-bit
Operating System: CP/M, MP/M 86, OASIS, UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 76M bytes
Maximum I/O Ports: 19
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10 995
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, OEM
Date First Installed: September 1982
Number Installed to Date: 500 — 1 000
(See Vendor Profile Page V-9)

DYNABYTE
MONARCH 8900
Small business
Word Length: 8/16-bit
Operating System: CP/M, MP/M 86, OASIS, UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 76M bytes
Maximum I/O Ports: 19
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9 000 to $14 000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, OEM
Date First Installed: September 1982
Number Installed to Date: 500 — 1,000

ELITE CORP.
CONSULTANT
Small business
Specific Application: CAD/CAM, Software Development
Word Length: 32-bit
Operating System: PBS
Languages Supported: Basic, Pascal, SMPL, Lisp
Minimum Memory: 512K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $17 900 to $33 000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: March 1983
Number Installed to Date: Less than 10
(See Vendor Profile Page V-9)

ETR STAR SYSTEMS
STAR-SYSTEM 1
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: ETR
Minimum Memory: 64K bytes
Maximum Memory: 196K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5 900 to $7 900
Maintenance: On-site
Average Maintenance Fee: $90
Date First Installed: July 1982
Number Installed to Date: 700
(See Vendor Profile Page V-9)

ETR STAR SYSTEMS
STAR-SY6TEM 2
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: ETR
Minimum Memory: 64K bytes
Maximum Memory: 196K bytes
Multiple Users: No
Maximum On-Line Storage: 11M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7 900 to $8 900
Maintenance: On-site
Average Maintenance Fee: $90
Date First Installed: January 1983
Number Installed to Date: 500 — 1,000

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/40
Mini
Word Length: 24-bit
Languages Supported: Cobol, Assembler, Vision
Minimum Memory: 24K bytes
Maximum Memory: 96K bytes
Multiple Users: Yes
Maximum On-Line Storage: 30M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $62 000
Maintenance: On-site
Average Maintenance Fee: $250
(See Vendor Profile Page V-10)

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/50
Mini
Word Length: 24-bit
Languages Supported: Cobol, Assembler, Vision
Minimum Memory: 24K bytes
Maximum Memory: 96K bytes
Multiple Users: Yes
Maximum On-Line Storage: 293M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $95 000
Maintenance: On-site
Average Maintenance Fee: $423

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/60
Mini
Word Length: 24-bit

Minis/Small Business Computers

Languages Supported: Cobol Assembler, Vision
Minimum Memory: 240K bytes
Maximum Memory: 720K bytes
Multiple Users: Yes
Maximum On-Line Storage: 82M bytes
Communications Protocols: Asynchronous, Synchronous Bisynchronous, SDLC, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $110,000
Maintenance: On-site
Average Maintenance Fee: $545

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/65
Mini
Word Length: 24-bit
Languages Supported: Cobol, Assembler, Vision
Minimum Memory: 288K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes
Maximum On-Line Storage: 82M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC; 2780/3780, 3270
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $130,000
Maintenance: On-site
Average Maintenance Fee: $590

FOUR-PHASE SYSTEMS, INC.
SYSTEM IV/70
Mini
Word Length: 24-bit
Languages Supported: Cobol Assembler, Vision
Minimum Memory: 48K bytes
Maximum Memory: 96K bytes
Multiple Users: Yes
Maximum On-Line Storage: 303M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $150,000
Maintenance: On-site
Average Maintenance Fee: $720

GENERAL AUTOMATION, INC.
ZEBRA 5000
Mini
Word Length: 16/32-bit
Operating System: XENIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Maximum Memory: 1.5M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 632M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $57,000 to $120,000
(See Vendor Profile Page V-10)

GENERAL ROBOTICS CORP.
GEMINI
Small business
Word Length: 16-bit
Operating System: RSX-11, RT-11, RSTS/E, UNIX
Languages Supported: Cobol, Fortran, Basic, APL, Dibol
Minimum Memory: 64K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,000
Maintenance: Third-party
Average Maintenance Fee: $450
Date First Installed: July 1976
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-10)

GENERAL ROBOTICS CORP.
PEGASUS
Mini
Word Length: 16-bit
Operating System: RSX-11, RT-11, RSTS/E, UNIX
Languages Supported: Cobol, Fortran, Basic, APL, Dibol
Minimum Memory: 64K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 96M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000
Maintenance: Third-party
Average Maintenance Fee: $450
Date First Installed: August 1980
Number Installed to Date: 100 — 500

GENERAL ROBOTICS CORP.
SCORPIO
Small business
Word Length: 16-bit
Operating System: RSX-11, RT-11, RSTS/E, UNIX
Languages Supported: Cobol, Fortran, Basic, APL, Dibol
Minimum Memory: 64K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 15
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,000
Maintenance: Third-party
Average Maintenance Fee: $450
Date First Installed: July 1981
Number Installed to Date: 100 — 500

GENERAL ROBOTICS CORP.
TRISTAR SERIES
Small business
Word Length: 16-bit
Operating System: RSX-11, RT-11, RSTS/E, TSX
Languages Supported: Cobol, Fortran, Basic, APL, Dibol
Minimum Memory: 64K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 16
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9,000
Maintenance: Kalpro
Average Maintenance Fee: $450
Date First Installed: July 1976
Number Installed to Date: 100 — 500

GOULD, INC.
3277
Mini
Word Length: 32-bit
Operating System: UNIX, MPX32
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Ada
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 38.4G bytes
Maximum I/O Ports: 122
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $100,000 to $150,000
Average Maintenance Fee: $1,000
Date First Installed: 1975
(See Vendor Profile Page V-10)

GOULD, INC.
3287
Mini
Word Length: 32-bit
Operating System: UNIX, MPX32
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 38.4G bytes
Maximum I/O Ports: 122
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $200,000 to $330,000
Maintenance: On-site
Average Maintenance Fee: $1,800
Date First Installed: 1980

GOULD, INC.
32B780
Mini
Word Length: 32-bit
Operating System: UNIX, MPX32
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 38.4G bytes
Maximum I/O Ports: 122
Communications Protocols: None; Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $330,000 to $360,000
Average Maintenance Fee: $2,640
Date First Installed: 1980

GRID SYSTEMS CORP.
COMPASS
Mini
Word Length: 16-bit
Operating System: CCOS
Languages Supported: Fortran; Basic, Pascal, C, PLM
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 384K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $8,150
Maintenance: On-site
Date First Installed: October 1982
(See Vendor Profile Page V-10)

HARDY COMPUTER CORP.
256
Small business
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 50M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous, Bisynchronous; SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,500 to $5,000
Maintenance: Third-party
Date First Installed: January 1983
Number Installed to Date: 10
(See Vendor Profile Page V-10)

HARRIS CORP.
9015
Small business
Word Length: 16-bit
Operating System: CP/M 86, MS-DOS
Languages Supported: Cobol, Basic
Minimum Memory: 512K bytes
Maximum Memory: 512K bytes
Maximum On-Line Storage: 20M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,300
Maintenance: On-site
(See Vendor Profile Page V-10)

HARRIS CORP.
9020
Small business
Word Length: 16-bit
Operating System: CP/M 86, MS-DOS
Languages Supported: Cobol, Basic
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 16M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $27,250
Maintenance: On-site

HARTRONIX, INC.
4S32
Mini
Languages Supported: Basic, Forth, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 24M bytes
Multiple Users: Yes, 116
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,000 to $200,000

Maintenance: Return to manufacturing facility
Date First Installed: 1978
Number Installed to Date: 50
(See Vendor Profile Page V-10)

HEWLETT-PACKARD CO.
HP 125 SERIES
Small business
Word Length: Dual 8-bit
Operating System: CP/M
Languages Supported: Basic, Pascal, Algol, Lisp
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 9.6M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,000 to $23,000
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: 1981
(See Vendor Profile Page V-11)

HEWLETT-PACKARD CO.
HP 250 SERIES
Small business
Word Length: 16-bit
Operating System: BOS
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 576K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 260M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $20,000
Maintenance: On-site
Average Maintenance Fee: $80
Date First Installed: 1978

HEWLETT-PACKARD CO.
HP 300
Mini
Word Length: 16-bit
Operating System: AMIGO 300
Languages Supported: Fortran, Basic, RPG
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 48M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $37,000 to $66,000
Maintenance: On-site
Average Maintenance Fee: $350
Date First Installed: 1979
Number Installed to Date: 100 — 500

HEWLETT-PACKARD CO.
HP 1000A SERIES
Mini
Word Length: 16-bit
Operating System: RTE
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 540M bytes
Maximum I/O Ports: 13
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $22,000
Maintenance: On-site
Average Maintenance Fee: $60
Date First Installed: 1982

HEWLETT-PACKARD CO.
HP 1000E SERIES
Mini
Word Length: 16-bit
Operating System: RTE
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 1.9G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $23,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: 1975

HEWLETT-PACKARD CO.
HP 1000F SERIES
Mini
Word Length: 16-bit
Operating System: RTE
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 1.9G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $32,000
Maintenance: On-site
Average Maintenance Fee: $160
Date First Installed: 1979

HEWLETT-PACKARD CO.
HP 1000L SERIES
Mini
Word Length: 16-bit
Operating System: RTE
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 540M bytes
Maximum I/O Ports: 13
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $8,000 to $17,000
Maintenance: On-site
Average Maintenance Fee: $60
Date First Installed: 1980

HEWLETT-PACKARD CO.
HP 1000M SERIES
Mini
Word Length: 16-bit
Operating System: RTE
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 1.9G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site
Date First Installed: 1875

HEWLETT-PACKARD CO.
HP 3000 III
Mini
Word Length: 16-bit
Operating System: MPE
Languages Supported: Cobol, Fortran, Basic, RPG, SPL
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 120M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, TTY
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $60,000
Maintenance: On-site
Average Maintenance Fee: $270
Date First Installed: June 1978

HEWLETT-PACKARD CO.
HP 3000 SERIES 40
Mini
Word Length: 16-bit
Operating System: MPE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, SPL
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 56
Maximum On-Line Storage: 3.2G bytes
Communications Protocols: Asynchronous, SDLC, SDLC/SNA, X.25, X.21
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $85,000
Maintenance: On-site
Average Maintenance Fee: $600
Date First Installed: November 1981

HEWLETT-PACKARD CO.
HP 3000 SERIES 40SX
Mini
Word Length: 16-bit
Operating System: MPE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, SPL
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 56
Maximum On-Line Storage: 3.2G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $50,000
Maintenance: On-site
Average Maintenance Fee: $390
Date First Installed: February 1982

HEWLETT-PACKARD CO.
HP 3000 SERIES 44
Mini
Word Length: 16-bit
Operating System: MPE
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 96
Maximum On-Line Storage: 6.4G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, X.21
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $110,000
Maintenance: On-site
Date First Installed: 1981

HEWLETT-PACKARD CO.
MODEL 5 MICROSYSTEM
Mini
Word Length: 16-bit
Operating System: RTE
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 200M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $9,800 to $13,000
Maintenance: On-site
Date First Installed: July 1981

HONEYWELL, INC.
8/32
Small business
Word Length: 16-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 26M bytes
Maximum I/O Ports: 12
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $26,000 to $35,000
Maintenance: On-site
Average Maintenance Fee: $175
Date First Installed: 1981
(See Vendor Profile Page V-11)

HONEYWELL, INC.
8/34
Small business
Word Length: 16-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 12
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $30,000 to $40,000
Maintenance: On-site
Average Maintenance Fee: $200
Date First Installed: 1981

Minis/Small Business Computers

HONEYWELL, INC.
6/38
Mini
Word Length: 16-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 34
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $26,000
Maintenance: On-site
Average Maintenance Fee: $130
Date First Installed: 1981

HONEYWELL, INC.
6/48
Mini
Word Length: 16-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 46
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $32,000
Average Maintenance Fee: $150
Date First Installed: 1981

HONEYWELL, INC.
6/54
Mini
Word Length: 16-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 54
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $39,000
Maintenance: On-site
Average Maintenance Fee: $160
Date First Installed: 1981

HONEYWELL, INC.
6/74
Mini
Word Length: 16-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 54
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $65,000
Maintenance: On-site
Average Maintenance Fee: $320
Date First Installed: 1981

HONEYWELL, INC.
6/76
Mini
Word Length: 16-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 82
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $75,000
Maintenance: On-site
Average Maintenance Fee: $350
Date First Installed: 1981

HONEYWELL, INC.
DPS 6/31
Small business
Word Length: 16-bit
Operating System: GCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 26M bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $20,000 to $30,000
Maintenance: On-site
Average Maintenance Fee: $175
Date First Installed: March 1982

IBM
8130
Mini
Word Length: 16-bit
Operating System: DPCX
Languages Supported: Cobol, Fortran
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 639M bytes
Communications Protocols: SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000
Maintenance: On-site
Date First Installed: August 1979
(See Vendor Profile Page V-11)

IBM
8140
Mini
Word Length: 16-bit
Operating System: DPCX
Languages Supported: Cobol, Fortran
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 639M bytes
Communications Protocols: SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000
Maintenance: On-site
Date First Installed: August 1979
Number Installed to Date: 10,000 — 50,000

IBM
SERIES/1
Mini
Word Length: 16-bit
Operating System: RPS, EDX, CPS
Languages Supported: Cobol, Fortran, Basic, PL/1
Minimum Memory: 32K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Communications Protocols: SDLC, SDLC/SNA
Vendor Sales Terms: Purchase, Lease
Purchase Price: $30,000
Maintenance: On-site
Date First Installed: November 1976
Number Installed to Date: 10,000 — 50,000

IBM
SYSTEM/34
Small business
Word Length: 8-bit
Operating System: SSP
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 32K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 256K bytes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $60,000
Maintenance: On-site
Date First Installed: December 1977
Number Installed to Date: 50,000 — 100,000

IBM
SYSTEM/36
Small business
Word Length: 16-bit
Languages Supported: Cobol, Fortran, Basic, RPG, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 30
Maximum On-Line Storage: 400M bytes
Communications Protocols: Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $40,000 to $100,000
Maintenance: On-site
Average Maintenance Fee: $200
Date First Installed: July 1983

ICL, INC.
DRS20
Small business
Word Length: 8-bit
Operating System: DRX
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 160K bytes
Maximum Memory: 7M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 61M bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $19,000
Maintenance: On-site
Date First Installed: March 1982
Number Installed to Date: 1,000
(See Vendor Profile Page V-11)

ICL, INC.
SYSTEM 25
Small business
Word Length: 40-bit
Operating System: DMF3
Languages Supported: Cobol, Assembler 3
Minimum Memory: 60K bytes
Maximum Memory: 1.2M bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 1.1G bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $80,000
Maintenance: On-site
Date First Installed: January 1981
Number Installed to Date: 500 — 1,000

INDEPENDENT BUSINEEE EYETEME, INC.
BETA SYSTEM 2
Small business
Word Length: 8-bit
Operating System: IBS-PNET
Languages Supported: Pascal CBM
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 1.1G bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,250 to $16,930
Maintenance: On site, IASCO
Average Maintenance Fee: $60
Date First Installed: November 1980
Number Installed to Date: 200
(See Vendor Profile Page V-11)

INDEP, INC.
APOGEE II
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,500 to $11,500
Maintenance: On-site
Average Maintenance Fee: $86
Date First Installed: February 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-11)

INDEP, INC.
APOGEE III
Small business

Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 35
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,495 to $23,960
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: February 1982
Number Installed to Date: 10 — 50

INFOREX, INC.
INFOREX 1303
Mini
Specific Application: Data Entry
Word Length: 8-bit
Operating System: NATIVE
Minimum Memory: 24K bytes
Maximum Memory: 40K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 2K bytes
Maximum I/O Ports: 3
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $18,900 to $42,100
Maintenance: On-site
Average Maintenance Fee: $500
Date First Installed: 1974
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-11)

INFOREX, INC.
INFOREX 3150
Mini
Specific Application: Data Entry
Word Length: 8-bit
Operating System: NATIVE
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 3
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $18,900 to $44,000
Maintenance: On-site
Average Maintenance Fee: $475
Date First Installed: March 1981
Number Installed to Date: 10 — 50

INFOREX, INC.
INFOREX 3200
Mini
Specific Application: Data Entry
Word Length: 8-bit
Operating System: NATIVE
Languages Supported: Ideal, Inforex D
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 3
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $27,650 to $76,850
Maintenance: On-site
Average Maintenance Fee: $575
Date First Installed: 1977
Number Installed to Date: 200

INFOREX, INC.
INFOREX 3300
Mini
Specific Application: Data Entry, Maxi-Edit
Word Length: 8-bit
Operating System: NATIVE
Languages Supported: Infodel
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 24M bytes
Maximum I/O Ports: 3
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $42,000 to $70,000
Maintenance: On-site
Average Maintenance Fee: $760
Date First Installed: 1975
Number Installed to Date: 100 — 500

INFOREX, INC.
INFOREX 5000
Mini
Word Length: 6-bit
Operating System: Proprietary
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 1.2G bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $75,000 to $250,000
Maintenance: On-site
Average Maintenance Fee: $1,200
Date First Installed: 1974
Number Installed to Date: 100 — 500

INFOREX, INC.
SYSTEM 9000
Mini
Specific Application: Distributed Data Entry and DDP
Word Length: 8-bit
Operating System: RMS
Languages Supported: Cobol, Info-Bus
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 180M bytes
Maximum I/O Ports: 29
Communications Protocols: 3270
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $40,000 to $85,000
Maintenance: On-site
Average Maintenance Fee: $500
Date First Installed: July 1981
Number Installed to Date: 100 — 500

INFOTECS, INC.
CC2
Small business
Word Length: 12-bit
Operating System: CC2
Languages Supported: Cobol, Fortran, Basic, Pascal, C, CP/M Basic
Minimum Memory: 128K bytes
Maximum Memory: 13M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 102M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $11,000 to $100,000
Maintenance: Third-party
Date First Installed: January 1980
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-11)

INFOTECS, INC.
CC2/16
Small business
Word Length: 16-bit
Operating System: CC2
Languages Supported: Cobol, Fortran, Basic, Pascal, C, CP/M Basic
Minimum Memory: 128K bytes
Maximum Memory: 13M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 102M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $100,000
Maintenance: Third-party

INTEGRATED DIGITAL PRODUCTS
MINI MATE
Mini
Word Length: 16-bit
Operating System: BITS, IRIS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum I/O Ports: 62
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $8,000
Maintenance: Return to manufacturing facility
Date First Installed: May 1982
Number Installed to Date: 3,000
(See Vendor Profile Page V-12)

INTEL CORP.
iDIS 86/445
Small business
Word Length: 16-bit
Operating System: RMX86
Languages Supported: Cobol, Fortran, Basic, Pascal, PLM, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 336M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $35,000 to $85,000
Maintenance: On-site
Date First Installed: April 1982
(See Vendor Profile Page V-12)

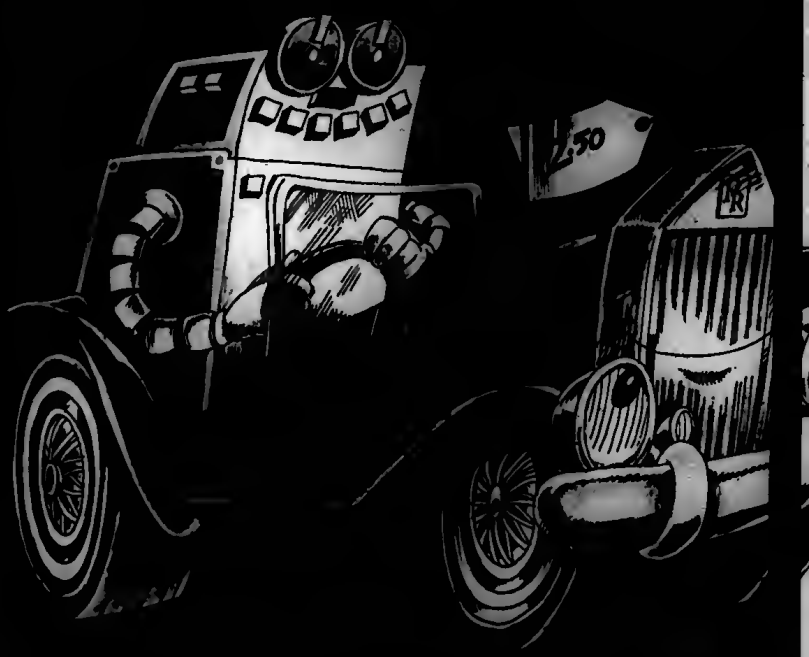
INTERACTIVE SYSTEMS TECHNOLOGY, INC.
IST-86
Small business
Word Length: 16-bit
Operating System: MP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C, Ada, Lisp
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 450M bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $13,000 to $16,000
Maintenance: Dealer/Distributor
Average Maintenance Fee: $200
Date First Installed: October 1982
Number Installed to Date: 50
(See Vendor Profile Page V-12)

LAZOR SYSTEMS, INC.
THE RETAILER
Small business
Word Length: 16-bit
Operating System: MLX
Languages Supported: Basic, Comply-Basic
Minimum Memory: 56K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 72M bytes
Maximum I/O Ports: 12
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $23,750 to $50,000
Maintenance: Dealer
Date First Installed: August 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-12)

LOBO DRIVES INTERNATIONAL
MAX-80
Small business
Specific Application: WP
Word Length: 8-bit
Operating System: CP/M, TRI DOT
Languages Supported: Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 8
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,750 to $4,200
Maintenance: Remote diagnostics
Date First Installed: October 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-13)

LOGICAL BUSINESS MACHINES
TINA
Small business
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: English
Minimum Memory: 64K bytes
Multiple Users: No

"If the auto industry had done what the computer industry has done in the last 30 years, a Rolls-Royce would cost $2.50 and get 2,000,000 miles per gallon."



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Minis/Small Business Computers

Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,985
Maintenance: Third-party
Date First Installed: September 1978
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-13)

MASSCOMP
MC500 SERIES
Mini
Specific Application: CAE, Graphics
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Fortran, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 6M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 6G bytes
Maximum I/O Ports: 48
Communications Protocols: Asynchronous, Ethernet
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25,000 to $100,000
Maintenance: On-site
Average Maintenance Fee: $400
Date First Installed: November 1982
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-13)

MICRODATA CORP.
REALITY
Small business
Word Length: 8-bit
Languages Supported: Basic, Assembly
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 48
Maximum On-Line Storage: 512M bytes
Communications Protocols: Asynchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $26,000 to $150,000
Maintenance: On-site
Date First Installed: December 1973
Number Installed to Date: 7,000
(See Vendor Profile Page V-13)

MICRODATA CORP.
SEQUEL
Mini
Word Length: 32-bit
Languages Supported: Basic, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 1G bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $140,000 to $400,000
Maintenance: On-site
Date First Installed: December 1981
Number Installed to Date: 200

MICRODATA CORP.
SOVEREIGN DDP
Mini
Word Length: 16-bit
Languages Supported: Cobol, Basic
Minimum Memory: 512K bytes
Maximum On-Line Storage: 1G bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Maintenance: On-site

MICROMATION, INC.
MARINER
Small business
Word Length: 8-bit
Operating System: CP/M, M/NET, MP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $18,000
Maintenance: TRW, Inc.
Date First Installed: January 1980
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-13)

MICROMATION, INC.
MI SYSTEM
Small business
Word Length: 8-bit
Minimum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 10.1M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $7,000 to $13,000
Maintenance: TRW, Inc.
Date First Installed: 1982

MICROMATION, INC.
M/SYSTEM
Small business
Word Length: 8-bit
Operating System: CP/M, M/NET, MP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Purchase Price: $13,000 to $18,000
Maintenance: TRW, Inc.
Date First Installed: 1980
Number Installed to Date: 500 — 1,000

MIDWEST SCIENTIFIC INSTRUMENTS, INC.
MSI-8800
Small business
Word Length: 8-bit
Operating System: SDOS
Languages Supported: Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,000 to $32,000
Maintenance: On-site, Third-party
Date First Installed: 1978
(See Vendor Profile Page V-13)

MINI-COMPUTER SYSTEMS, INC.
MICOS 100
Mini
Word Length: 16-bit
Operating System: MICOS
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 8
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $20,000 to $35,000
Maintenance: Third-party
Average Maintenance Fee: $200
Date First Installed: August 1977
Number Installed to Date: 300
(See Vendor Profile Page V-14)

MINI-COMPUTER SYSTEMS, INC.
MICOS 200
Mini
Word Length: 16-bit
Operating System: MICOS
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 24
Communications Protocols: 2780
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $50,000 to $85,000
Maintenance: Third-party
Average Maintenance Fee: $480
Date First Installed: 1973
Number Installed to Date: 1,000 — 5,000

MINI-COMPUTER SYSTEMS, INC.
MICOS 250
Mini
Word Length: 16-bit
Operating System: MICOS
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 32
Communications Protocols: 2780
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $70,000 to $100,000
Maintenance: Third-party
Average Maintenance Fee: $640
Date First Installed: November 1982
Number Installed to Date: 2

MINI-COMPUTER SYSTEMS, INC.
MICOS 300
Mini
Word Length: 16-bit
Operating System: MICOS
Languages Supported: Basic
Minimum Memory: 512K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $25,000 to $200,000
Maintenance: Third-party
Average Maintenance Fee: $1,200
Date First Installed: January 1979

MINI-COMPUTER SYSTEMS, INC.
MICOS 350
Mini
Word Length: 16-bit
Operating System: MICOS
Languages Supported: Basic
Minimum Memory: 768K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 32
Communications Protocols: 2780/3780
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $175,000 to $250,000
Maintenance: Third-party
Average Maintenance Fee: $1,600
Date First Installed: August 1982
Number Installed to Date:

MODULAR COMPUTER SYSTEMS, INC.
CLASSIC II/25
Mini
Word Length: 16-bit
Operating System: MAX IV OS
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, Coral
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $28,800 to $71,900
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: May 1982
(See Vendor Profile Page V-14)

MODULAR COMPUTER SYSTEMS, INC.
CLASSIC II/45
Mini
Word Length: 16-bit
Operating System: MAX IV OS
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, Coral

Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $43,200 to $300,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: May 1982
Number Installed to Date: 100 — 500

MORROW DESIGNS, INC.
DECISION 1
Small business
Word Length: 8-bit
Operating System: CP/M, UNIX
Languages Supported: Fortran, Basic, C
Minimum Memory: 256K bytes
Maximum Memory: 448K bytes
Multiple Users: Yes
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $10,000
Maintenance: On-site
Date First Installed: September 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-14)

MORROW DESIGNS, INC.
MICRO DECISION
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 768M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,195 to $1,695
Maintenance: On-site
Date First Installed: September 1982

MYLEE DIGITAL SCIENCES, INC.
3000 SERIES
Mini
Word Length: 16-bit
Operating System: Propretary
Languages Supported: Ace
Minimum Memory: 88K bytes
Maximum Memory: 288K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 64M bytes
Maximum I/O Ports: 19
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $36,000 to $140,000
Maintenance: On-site
Average Maintenance Fee: $450
Date First Installed: May 1976
(See Vendor Profile Page V-14)

NATIONAL MICRO PRODUCTS, INC.
NMP 126K
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 126K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Vendor Sales Terms: Purchase, Rental
Purchase Price: $3,000
Maintenance: On-site
(See Vendor Profile Page V-14)

NCR CORP.
I-9010
Small business
Word Length: 8-bit
Operating System: IDPS
Languages Supported: Cobol, Basic
Minimum Memory: 48K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 4G bytes
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $40,000
Maintenance: On-site
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-14)

NCR CORP.
I-9020
Small business
Word Length: 16-bit
Operating System: IMOS III
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 324K bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $20,000 to $60,000
Maintenance: On-site
Date First Installed: March 1981
Number Installed to Date: 100 — 500

NCR CORP.
TOWER 1632
Mini
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 200M bytes
Communications Protocols: Asynchronous
Distribution: End user
Purchase Price: $14,000 to $23,000

NEC INFORMATION SYSTEMS, INC.
ASTRA 210
Small business
Word Length: 16-bit
Operating System: ITOS
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 384K bytes
Multiple Users: Yes
Maximum On-Line Storage: 4.8M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $14,690
Maintenance: On-site, Third-party
Average Maintenance Fee: $120
Date First Installed: June 1979
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-15)

NEC INFORMATION SYSTEMS, INC.
ASTRA 230
Small business
Word Length: 16-bit
Operating System: IDOS
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 64M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Maintenance: On-site, Third-party
Average Maintenance Fee: $140
Date First Installed: June 1979

NEC INFORMATION SYSTEMS, INC.
ASTRA 250
Small business
Word Length: 16-bit
Operating System: ITOS
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 384K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes
Maximum On-Line Storage: 128M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $55,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $220
Date First Installed: June 1979
Number Installed to Date: 100 — 500

NEC INFORMATION SYSTEMS, INC.
ASTRA 270
Small business
Word Length: 16-bit
Operating System: ITOS
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 384K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 29
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $73,000
Average Maintenance Fee: $275
Date First Installed: November 1981

NEW ENGLAND DIGITAL CORP.
ABLE SERIES 40
Mini
Word Length: 16-bit
Operating System: ABLE OS
Languages Supported: XDL
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 21
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,500 to $60,000
Maintenance: Return to manufacturing facility
Date First Installed: June 1977
Number Installed to Date: 200
(See Vendor Profile Page V-15)

NEW ENGLAND DIGITAL CORP.
ABLE SERIES 80
Mini
Word Length: 16-bit
Operating System: ABLE OS
Languages Supported: XDL
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 21
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,500 to $60,000
Maintenance: Return to manufacturing facility
Date First Installed: June 1978
Number Installed to Date: 200

NICOLET INSTRUMENT CORP.
PATHFINDER 2
Mini
Word Length: 20-bit
Operating System: UNIX
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 560M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $40,000
Maintenance: On-site
Date First Installed: 1979
Number Installed to Date: 1,000
(See Vendor Profile Page V-15)

NIXDORF COMPUTER CORP.
600/36
Mini

Minis/Small Business Computers

Word Length: 16-bit
Operating System: DPEX
Languages Supported: Editor
Minimum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 66M bytes
Distribution: End user
Vendor Sales Terms: Purchase
(See Vendor Profile Page V-15)

NIXDORF COMPUTER CORP.
600/45
Mini
Word Length: 16-bit
Operating System: DPEX
Languages Supported: Editor
Minimum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 132M bytes
Distribution: End user
Vendor Sales Terms: Purchase

NIXDORF COMPUTER CORP.
600/55
Mini
Word Length: 16-bit
Operating System: DPEX
Languages Supported: Editor
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 264M bytes
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site

NIXDORF COMPUTER CORP.
8845
Small business
Word Length: 16-bit
Operating System: NIOS
Languages Supported: Editor
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 66M bytes
Communications Protocols: Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $30,000 to $150,000
Maintenance: On-site
Date First Installed: February 1982

NIXDORF COMPUTER CORP.
8860 MODEL 10
Mini
Word Length: 16-bit
Operating System: DIPOS
Languages Supported: Cobol
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 156M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $32,500 to $150,000
Maintenance: On-site, Remote diagnostics
Date First Installed: 1981

NIXDORF COMPUTER CORP.
8860 MODEL 40
Mini
Word Length: 16-bit
Operating System: DIPOS
Languages Supported: Cobol
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 312M bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $39,500 to $211,000
Maintenance: On-site, Remote diagnostics
Date First Installed: 1981

NIXDORF COMPUTER CORP.
8860 MODEL 5
Mini
Word Length: 16-bit
Operating System: DIPOS
Languages Supported: Cobol
Minimum Memory: 512K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 1M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $18,000 to $63,360
Maintenance: On-site, Remote diagnostics
Date First Installed: 1981

NIXDORF COMPUTER CORP.
8870 MODEL 1
Mini
Word Length: 16-bit
Operating System: NIROS
Languages Supported: Basic
Minimum Memory: 96K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 66M bytes
Communications Protocols: Asynchronous, Synchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site, Remote diagnostics

NIXDORF COMPUTER CORP.
8870 MODEL 3
Mini
Word Length: 16-bit
Operating System: NIROS
Languages Supported: Cobol, Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 264M bytes
Communications Protocols: Asynchronous, Synchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site, Remote diagnostics

NIXDORF COMPUTER CORP.
8870 MODEL 5
Mini
Word Length: 16-bit
Operating System: NIROS
Languages Supported: Cobol, Basic
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 660M bytes
Communications Protocols: Asynchronous, Synchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site, Remote diagnostics

NORDEN SYSTEMS
11/34M
Mini
Word Length: 16-bit
Operating System: DEC
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 1K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum I/O Ports: 11
Distribution: End user
Purchase Price: $30,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1977
(See Vendor Profile Page V-15)

NORDEN SYSTEMS
11/44M
Mini
Word Length: 16-bit
Operating System: RT-11, RSX-11M+, RSX-11M, IAS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 8K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Communications Protocols: DNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $52,000 to $250,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1981

NORDEN SYSTEMS
11/70M
Mini
Word Length: 16-bit
Operating System: RSX-11M, RSTS/E, RT-11, RSX-11S
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, Coral, C
Minimum Memory: 32K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Maximum I/O Ports: 19
Communications Protocols: DNA, DDCMP
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $130,000 to $400,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1975

NORSK DATA NORTH AMERICAN, INC.
ND100
Mini
Word Length: 16-bit
Operating System: SINTRAN III/VS
Languages Supported: Cobol, Fortran, Basic, RPG, Coral, Nord PL, Simula
Minimum Memory: 128K bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 2.3G bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous, Synchronous, HDLC, Nord-Net, Hasp
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $33,000 to $166,400
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $1,000
Date First Installed: 1978
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-15)

NORSK DATA NORTH AMERICAN, INC.
ND100/CE
Mini
Word Length: 16-bit
Operating System: SINTRAN III/VSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, Simula, Planc
Minimum Memory: 128K bytes
Maximum Memory: 32M-bytes
Multiple Users: Yes
Maximum I/O Ports: 20
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1978

NORSK DATA NORTH AMERICAN, INC.
ND100/CX
Mini
Word Length: 16-bit
Operating System: SINTRAN III/VSE
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, Simula, Planc
Minimum Memory: 128K bytes
Maximum Memory: 32M bytes
Multiple Users: Yes
Maximum On-Line Storage: 2.3G bytes
Maximum I/O Ports: 16
Communications Protocols: Cosmos
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1978

NORSK DATA NORTH AMERICAN, INC.
ND SATELLITE/5
Mini
Operating System: SINTRAN III/VS
Languages Supported: Fortran, Basic, Pascal, PED, Notis-WP
Minimum Memory: 256K bytes
Maximum Memory: 11.2M bytes
Multiple Users: Yes
Maximum I/O Ports: 5
Communications Protocols: HDLC, ND-Net
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1982

NORSK DATA NORTH AMERICAN, INC.
ND SATELLITE/9
Mini
Operating System: SINTRAN III/VS
Languages Supported: Fortran Basic Pascal PED Notis-WP
Minimum Memory: 512K bytes
Maximum Memory: 21 7M bytes
Multiple Users: Yes
Maximum I/O Ports: 9
Communications Protocols: HDLC, ND-Net
Distribution: End user
Vendor Sales Terms: Purchase Rental Lease
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1982

NUCLEAR DATA, INC.
680
Mini
Specific Application: Data Acquisition
Word Length: 16-bit
Operating System: RT-11
Languages Supported: Fortran Basic
Minimum Memory: 56K bytes
Maximum Memory: 56K bytes
Multiple Users: No
Maximum I/O Ports: 4
Communications Protocols: Asynchronous DDCMP
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30 000 to $50 000
Maintenance: On-site
Date First Installed: January 1981
Number Installed to Date: 75
(See Vendor Profile Page V-15)

NUCLEAR DATA, INC.
6700
Mini
Word Length: 16-bit
Operating System: MIDAS
Languages Supported: Fortran Basic
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 20
Maximum On-Line Storage: 300M bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $45 000 to $150,000
Maintenance: On-site
Date First Installed: June 1976
Number Installed to Date: 500

OCTAGON COMPUTER SYSTEMS
OCTAGON 8/16
Small business
Word Length: 8/16-bit
Operating System: CP/M 80 CP/M 86 MS-DOS PC-DOS
Languages Supported: Cobol Fortran Basic Pascal M'Basic C/Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 8
Maximum On-Line Storage: 105M bytes
Communications Protocols: Bisynchronous, Octanet
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5 000 to $17,000
Maintenance: Third-party
(See Vendor Profile Page V-15)

ONYX SYSTEMS, INC.
C8002
Mini
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol Fortran Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 8
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $24,000
Maintenance: RCA
Date First Installed: 19815
Number Installed to Date: 1 000 — 5 000
(See Vendor Profile Page V-15)

OSM COMPUTER CORP.
ZEUS 2
Small business
Word Length: 8-bit
Operating System: MUSE CP/M
Languages Supported: Cobol, Fortran Basic, Pascal PL/1
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 4
Maximum On-Line Storage: 200M bytes
Maximum I/O Ports: 35
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $15 000 to $30,000
Maintenance: Third-party
Date First Installed: March 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-16)

OSM COMPUTER CORP.
ZEUS 3
Small business
Word Length: 8-bit
Operating System: MUSE CP/M
Languages Supported: Cobol, Fortran Basic, Pascal PL/1
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 60M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8 000 to $12,000
Maintenance: Third-party
Date First Installed: June 1982
Number Installed to Date: 100 — 500

PARADYNE CORP.
8400
Mini
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol Pascal C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 36
Communications Protocols: Bisynchronous SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $67,000 to $88 900
Maintenance: On-site
Average Maintenance Fee: $540
Date First Installed: April 1981
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-16)

PARALLEL COMPUTERS, INC.
CPU16/100
Small business
Operating System: UNIX
Languages Supported: Cobol Fortran Basic Pascal C
Minimum Memory: 512K bytes
Maximum Memory: 5M bytes
Multiple Users: Yes 16
Maximum On-Line Storage: 280M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous Bisynchronous SDLC/SNA 3270
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25 000 to $42 000
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $420
Date First Installed: January 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-16)

PARALLEL COMPUTERS, INC.
CPU16/200
Small business
Operating System: UNIX
Languages Supported: Cobol Fortran Basic Pascal C
Minimum Memory: 512K bytes
Maximum Memory: 5M bytes
Multiple Users: Yes 32
Maximum On-Line Storage: 1 6G bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous Bisynchronous, SDLC/SNA, 3270
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25 000 to $75 000
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $420
Date First Installed: January 1982
Number Installed to Date: Less than 10

PEGASUS DATA SYSTEMS
PEGASUS 1A
Small business
Word Length: 8-bit
Operating System: PDOS CP/M
Languages Supported: Cobol, Fortran Basic Pascal C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 2 4M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,100 to $3 000
Maintenance: Return to manufacturing facility
Date First Installed: October 1981
Number Installed to Date: 600
(See Vendor Profile Page V-16)

PEGASUS DATA SYSTEMS
PEGASUS CONQUEROR
Small business
Word Length: 8-bit
Operating System: CP/M PDOS
Languages Supported: Cobol, Fortran, Basic Pascal C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $990 to $1,500
Maintenance: Return to manufacturing facility
Date First Installed: November 1982
Number Installed to Date: 100

PERIPHONICS CORP.
TCOMM
Mini
Word Length: 16-bit
Languages Supported: Assembler, Forth
Minimum Memory: 32K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase Lease
Purchase Price: $200 000
Maintenance: On-site
Date First Installed: June 1982
(See Vendor Profile Page V-16)

PERIPHONICS CORP.
VOICE PAC
Mini
Word Length: 16-bit
Languages Supported: Assembler Forth
Minimum Memory: 32K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $150,000
Maintenance: On-site
Date First Installed: May 1982

PERTEC COMPUTER CORP.
PERTEC 3000
Small business
Word Length: 18-bit
Operating System: P3003 P3000
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 1K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 140M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: June 1982
Number Installed to Date: 1 000 — 5 000
(See Vendor Profile Page V-16)

Minis/Small Business Computers

PERTEC COMPUTER CORP.
XL40
Mini
Word Length: 16-bit
Operating System: XLOS
Languages Supported: Cobol
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 300M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: 1969

PERTEC COMPUTER CORP.
XL50
Mini
Word Length: 16-bit
Operating System: XLOS
Languages Supported: Cobol
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 300M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: 1969

PLESSEY PERIPHERAL SYSTEMS
SERIES 6000
Small business
Word Length: 16-bit
Operating System: XENIX, MUMPS
Languages Supported: Cobol, Fortran, Basic, C, Dibol
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
(See Vendor Profile Page V-16)

PLESSEY PERIPHERAL SYSTEMS
SYSTEM 24 SERIES
Mini
Word Length: 16-bit
Operating System: RSX-11M, XENIX, RSTS/E, ISM-11
Languages Supported: Cobol, Fortran, Basic, Dibol
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 127
Maximum On-Line Storage: 256M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase

PLESSEY PERIPHERAL SYSTEMS
SYSTEM 34 SERIES
Mini
Word Length: 16-bit
Operating System: RSX-11M, RSTS/E, MUMPS
Languages Supported: Cobol, Fortran, Basic, Basic plus, APL
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase

PLESSEY PERIPHERAL SYSTEMS
SYSTEM 44 SERIES
Mini
Word Length: 16-bit
Operating System: RSX-11M, ISM-11, MUMPS, RSTS/E
Languages Supported: Cobol, Fortran, Basic, Basic plus, RPG, APL
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 127
Maximum On-Line Storage: 538M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25
Distribution: End user

PLEXUS COMPUTERS
PLEXUS P/25
Mini
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 288M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $14,950
Maintenance: Return to manufacturing facility, On-site, Third party
Date First Installed: June 1982
(See Vendor Profile Page V-17)

PLEXUS COMPUTERS
PLEXUS P/35
Mini
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 288M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $17,950
Maintenance: Return to manufacturing facility, On-site, Third party
Date First Installed: March 1983

PLEXUS COMPUTERS
PLEXUS P/40
Mini
Specific Application: General Purpose
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 580M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $37,950
Maintenance: Return to manufacturing facility, On-site, Third-party
Date First Installed: September 1981

PLEXUS COMPUTERS
PLEXUS P/60
Mini
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 580M bytes
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $42,950
Maintenance: Return to manufacturing facility, On-site, Third-party
Date First Installed: March 1983

POINT FOUR DATA CORP.
MARK 1
Mini
Word Length: 16-bit
Operating System: IRIS, CP/M
Languages Supported: Basic, Assembly
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,000 to $2,795
Maintenance: Third-party
Date First Installed: May 1982
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-17)

POINT FOUR DATA CORP.
MARK 3
Mini
Word Length: 16-bit
Operating System: IRIS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembly
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,000 to $6,800
Maintenance: Third-party
Date First Installed: May 1981
Number Installed to Date: 500 — 1,000

POINT FOUR DATA CORP.
MARK 5
Mini
Word Length: 16-bit
Operating System: IRIS
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $10,000
Maintenance: Third-party
Date First Installed: March 1979
Number Installed to Date: 500 — 1,000

POINT FOUR DATA CORP.
MARK 8
Mini
Word Length: 16-bit
Operating System: IRIS
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $19,000
Maintenance: Third-party
Date First Installed: November 1981

PRODIGY SYSTEMS, INC.
PRODIGY 1
Small business
Word Length: 8-bit
Operating System: CP/M, PROTIGE
Languages Supported: Protige
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 20.5M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $12,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $100
Date First Installed: May 1979
(See Vendor Profile Page V-17)

PRODIGY SYSTEMS, INC.
PRODIGY 2
Small business
Word Length: 8-bit
Operating System: CP/M, PROTIGE
Languages Supported: Protige
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 20.5M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $14,000
Maintenance: On-site, Third-party

Average Maintenance Fee: $100
Date First Installed: June 1980

QANTEL CORP.
SYSTEM 10
Mini
Word Length: 16-bit
Operating System: BE$T
Languages Supported: Cobol, Basic
Minimum Memory: 96K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 36M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $16,000
Maintenance: On-site
Average Maintenance Fee: $150
(See Vendor Profile Page V-17)

QANTEL CORP.
SYSTEM 20
Small business
Word Length: 16-bit
Operating System: BE$T
Languages Supported: Cobol, Basic
Minimum Memory: 96K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 75M bytes
Maximum I/O Ports: 12
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $30,000
Maintenance: On-site
Average Maintenance Fee: $200
Date First Installed: November 1981
Number Installed to Date: 100 — 500

QANTEL CORP.
SYSTEM 40
Small business
Word Length: 16-bit
Operating System: BE$T
Languages Supported: Cobol, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 150M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Purchase Price: $75,000
Maintenance: On-site
Date First Installed: August 1982
Number Installed to Date: 160

QANTEL CORP.
SYSTEM 64
Small business
Word Length: 16-bit
Operating System: BE$T
Languages Supported: Cobol, Basic
Minimum Memory: 512K bytes
Maximum Memory: 40M bytes
Multiple Users: Yes, 100
Maximum On-Line Storage: 400M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $250,000
Maintenance: On-site

Q1 CORP.
Q1-68000
Small business
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 2.2M bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 154M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $13,000 to $500,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $300
Date First Installed: May 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-17)

Q1 CORP.
Q1/LITE
Small business
Word Length: 8-bit
Operating System: Q1, CP/M
Languages Supported: PL/1
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 208M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $250,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $250
Date First Installed: February 1977
Number Installed to Date: 1,000 — 5,000

Q1 CORP.
Q1/LMC
Small business
Word Length: 8-bit
Operating System: Q1
Languages Supported: PL/1
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $15,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $150
Date First Installed: February 1974

Q1 CORP.
Q1/MICROLITE
Small business
Word Length: 8-bit
Operating System: Q1, CP/M
Languages Supported: PL/1
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 208M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $250,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $250
Date First Installed: January 1977
Number Installed to Date: 1,000 — 5,000

RADIAN CORP.

UT-1
Mini
Word Length: 16-bit
Minimum Memory: 8K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $37,885 to $100,000
Maintenance: On-site
Date First Installed: 1971
(See Vendor Profile Page V-18)

RADIAN CORP.
UT-4
Mini
Specific Application: Communications Processor
Word Length: 16-bit
Minimum Memory: 8K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $50,000 to $100,000
Maintenance: On-site
Date First Installed: 1982

RAYTHEON CO.
RDS 500
Mini
Word Length: 16-bit
Operating System: COS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 300M bytes
Communications Protocols: Bisynchronous, PARS/SLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $70,000 to $500,000
Maintenance: On-site
Average Maintenance Fee: $1,200
Date First Installed: 1977
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-18)

RAYTHEON CO.
RDS 550
Mini
Word Length: 16-bit
Operating System: COS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 256M bytes
Communications Protocols: Bisynchronous, PARS/SLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $60,000
Date First Installed: 1977

RAYTHEON CO.
RDS 7500 RAYNET I
Mini
Word Length: 16-bit
Operating System: PCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 126
Communications Protocols: Bisynchronous, PARS/SLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $60,000 to $600,000
Maintenance: On-site
Average Maintenance Fee: $2,400
Date First Installed: 1979
Number Installed to Date: 50 — 100

RAYTHEON CO.
RDS 7500 RAYNET S
Mini
Word Length: 16-bit
Operating System: PCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 126
Communications Protocols: Bisynchronous, PARS/SLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $60,000 to $600,000
Maintenance: On-site
Average Maintenance Fee: $2,400
Date First Installed: 1979
Number Installed to Date: 50 — 100

RAYTHEON CO.
RDS 7500 RAYNET III
Mini
Specific Application: Protocol Conversion
Word Length: 16-bit
Operating System: PCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 126
Communications Protocols: Bisynchronous, PARS/SLC

Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $80,000 to $600,000
Maintenance: On-site
Average Maintenance Fee: $2,400
Date First Installed: 1979
Number Installed to Date: 50 — 100

RAYTHEON CO.
RDE 7500 RAYNET IV
Mini
Specific Application: Message Switching
Word Length: 16-bit
Operating System: PCOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 126
Communications Protocols: Bisynchronous, PARS/SLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $80,000 to $600,000
Maintenance: On-site
Average Maintenance Fee: $2,400
Date First Installed: 1979
Number Installed to Date: Under 10

REXON BUSINESE MACHINEE CORP.
RX15
Mini
Word Length: 16-bit
Operating System: RECAP, MP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 960K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $22,000
Maintenance: TRW, Inc.
Date First Installed: February 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-18)

REXON BUSINESS MACHINES CORP.
RX20
Mini
Word Length: 16-bit
Operating System: RECAP, MP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 960K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $28,000
Maintenance: TRW, Inc.
Date First Installed: April 1980

REXON BUSINESS MACHINES CORP.
RX30
Mini
Word Length: 16-bit
Operating System: RECAP, MP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 960K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $43,000
Maintenance: TRW, Inc.
Date First Installed: April 1980
Number Installed to Date: 100 — 500

REXON BUSINESS MACHINES CORP.
RX100
Mini
Word Length: 16-bit
Operating System: RECAP, MP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 960K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 300M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $13,000
Maintenance: TRW, Inc.
Date First Installed: August 1982

REXON BUSINESS MACHINES CONP.
RX400
Mini
Word Length: 16-bit
Operating System: RECAP, MP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 960K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 280M bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $19,000
Maintenance: TRW, Inc.
Date First Installed: 1982

REYNOLDS & REYNOLDS CO.
EXPANSION 6000
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 16K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 60M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $42,000
Maintenance: On-site
Average Maintenance Fee: $420
Date First Installed: May 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-18)

SCENIC COMPUTER EVETEM CORP.
SCENIC MODEL ONE
Mini
Word Length: 32-bit
Operating System: UCSE
Languages Supported: Fortran, Basic, Pascal, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $25,000
Date First Installed: January 1983
Number Installed to Date: 60
(See Vendor Profile Page V-18)

ECI SYSTEMS, INC.
MERCURY 2
Mini
Word Length: 16-bit
Operating System: VOS
Languages Supported: Cobol, Pascal, Micro-Basic
Minimum Memory: 64K bytes
Maximum Memory: 384K bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25,000
Maintenance: On-site
(See Vendor Profile Page V-18)

SCI SYSTEMS, INC.
MERCURY 3
Mini
Word Length: 16-bit
Operating System: VOS
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 384K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $35,000
Maintenance: On-site
Date First Installed: 1978
Number Installed to Date: 500 — 1,000

SCI SYSTEMS, INC.
VENUS 1000
Mini
Specific Application: Small Business
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 126K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,800 to $15,000
Maintenance: OEM
Date First Installed: January 1983
Number Installed to Date: 3

SECONO SOURCE COMPUTERS, INC.
SSCI-100
Mini
Word Length: 16-bit
Operating System: UNIX, OS-100
Languages Supported: Cobol, Fortran, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 600M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $30,000 to $100,000
Maintenance: On-site
Date First Installed: March 1983
Number Installed to Date: 5
(See Vendor Profile Page V-19)

SENTINEL COMPUTER CORP.
SENTINEL-30
Mini
Word Length: 16-bit
Operating System: DBOS
Languages Supported: Cobol, Basic, DBL
Minimum Memory: 96K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 17
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Rental
Purchase Price: $25,000 to $50,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $270
Date First Installed: July 1979
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-19)

SENTINEL COMPUTER CORP.
SENTINEL-40
Mini
Word Length: 16-bit
Operating System: DBOS
Languages Supported: Cobol, Basic, DBL
Minimum Memory: 96K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 17
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous, Bisynchronous

Minis/Small Business Computers

Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $33,000 to $70,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $375
Date First Installed: July 1979
Number Installed to Date: 100 — 500

SENTINEL COMPUTER CORP.
SENTINEL-50
Mini
Word Length: 16-bit
Operating System: DBOS
Languages Supported: Cobol, Basic, DBL
Minimum Memory: 96K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 17
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $42,000 to $90,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $455
Date First Installed: July 1979
Number Installed to Date: 100 — 500

SENTINEL COMPUTER CORP.
SENTINEL-80
Mini
Word Length: 16-bit
Operating System: DBOS
Languages Supported: Cobol, Basic, DBL
Minimum Memory: 96K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 17
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $46,000 to $110,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $500
Date First Installed: July 1979
Number Installed to Date: 100 — 500

SENTINEL COMPUTER CORP.
SENTINEL SERIES 10
Mini
Word Length: 16-bit
Operating System: DBOS
Languages Supported: Cobol, Basic, Macro, Assembler
Minimum Memory: 96K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 47
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $13,000 to $30,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $120
Date First Installed: July 1979
Number Installed to Date: 100 — 500

SENTINEL ENERGY CONTROL SYSTEMS, INC.
MC-8
Mini
Word Length: 16-bit
Languages Supported: Basic, PLM, Assembler
Minimum Memory: 16K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,000 to $50,000
Maintenance: On-site
Date First Installed: 1976
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-19)

SENTINEL ENERGY CONTROL SYSTEMS, INC.
MC-16
Mini
Word Length: 16-bit
Languages Supported: PLM, Assembler
Minimum Memory: 16K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,000 to $50,000
Maintenance: On-site
Date First Installed: 1976
Number Installed to Date: 100 — 500

SENTINEL ENERGY CONTROL SYSTEMS, INC.
MICRO 4
Mini
Word Length: 16-bit
Minimum Memory: 16K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,000 to $50,000
Maintenance: On-site
Date First Installed: 1976
Number Installed to Date: 100 — 500

SOUTHERN COMPUTER SYSTEMS, INC.
SCS-9000
Small business
Word Length: 8/16-bit
Operating System: CP/M, MS-DOS, MP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic, RPG, PLM, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 24
Communications Protocols: Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $7,000 to $25,000
Maintenance: On-site
Average Maintenance Fee: $130
Date First Installed: April 1980
Number Installed to Date: 10 — 50

SPERRY CORP.
90/30 SYSTEM
Small business
Word Length: 64-bit
Operating System: OS/3
Languages Supported: Cobol, Fortran, Basic, RPG, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 57.9M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $52,728 to $530,000
Maintenance: On-site
Average Maintenance Fee: $1,000
Date First Installed: 1975
Number Installed to Date: 820
(See Vendor Profile Page V-19)

SPERRY CORP.
90/60 SYSTEM
Small business
Word Length: 64-bit
Operating System: OS/4, VS/9
Languages Supported: Cobol, Fortran, Basic, RPG, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.6G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $284,000 to $500,000
Maintenance: On-site
Average Maintenance Fee: $4,000

SPERRY CORP.
90/80 SYSTEM
Small business
Word Length: 64-bit
Operating System: OS/4, VS/9
Languages Supported: Cobol, Fortran, Basic, RPG, Assembler
Minimum Memory: 1M bytes
Maximum Memory: 8M bytes
Maximum On-Line Storage: 1.6G bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $798,250 to $2,000,000
Maintenance: On-site

SPERRY CORP.
1900/10 SYSTEM
Small business
Operating System: Proprietary
Languages Supported: Cobol
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 200M bytes
Communications Protocols: SDLC/SNA, Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $31,404 to $100,000

TO COMPUTER SYSTEMS/C-23

Maintenance: On-site

SPERRY CORP.
BC7
Small business
Operating System: Proprietary
Languages Supported: RPG
Minimum Memory: 32K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 50M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $13,000 to $90,000
Maintenance: On-site
Date First Installed: April 1977
Number Installed to Date: 2,500

SPERRY CORP.
SYSTEM 80 MODELS 3 & 5
Small business
Operating System: OS/3
Languages Supported: Cobol, Fortran, Basic, RPG, Assembly, Escort
Minimum Memory: 262K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 118.2M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $59,261 to $200,000
Maintenance: On-site
Average Maintenance Fee: $600
Date First Installed: 1982
Number Installed to Date: 300

SPERRY CORP.
SYSTEM 80 MODELS 4 & 6
Small business
Operating System: OS/3
Languages Supported: Cobol, RPG, Fortran, Basic, Assembly, Escort
Minimum Memory: 524K bytes
Maximum Memory: 4M bytes
Maximum On-Line Storage: 119.2M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $66,082 to $500,000
Maintenance: On-site
Date First Installed: 1978
Number Installed to Date: 48

SPERRY CORP.
V77-XXX SERIES
Mini
Word Length: 16-bit
Operating System: VORTEX
Languages Supported: Cobol, Fortran
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Maximum On-Line Storage: 104M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $29,000 to $250,000
Date First Installed: 1977
Number Installed to Date: 1,000

TAYLOR INSTRUMENT CO.
MOD3103
Mini
Specific Application: Process Control
Word Length: 16-bit
Operating System: POL300
Languages Supported: POL
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $60,000 to $100,000
Maintenance: On-site
Date First Installed: 1979
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-20)

TAYLOR INSTRUMENT CO.
MOD3106
Mini
Specific Application: Process Control
Word Length: 16-bit
Operating System: POL 600
Languages Supported: POL
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $150,000 to $400,000
Maintenance: On-site
Date First Installed: 1973
Number Installed to Date: 100 — 500

TAYLOR INSTRUMENT CO.
MOD3606
Mini
Specific Application: Process Control
Word Length: 16-bit
Operating System: TMX
Languages Supported: Fortran; Comgen; Tabl
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $270,000 to $700,000
Maintenance: On-site
Date First Installed: 1976
Number Installed to Date: 10 — 50

TECHNICO, INC.
TI 32
Small business
Word Length: 16-bit
Operating System: TMOS
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes,6
Maximum On-Line Storage: 116M bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,000 to $25,000
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: September 1980
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-20)

TELCOR INDUSTRIES, INC.
CASH/COMP
Small business
Specific Application: POS
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 12M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,995
Maintenance: Xerox Corp
(See Vendor Profile Page V-20)

TELEFILE COMPUTER PRODUCTS, INC.
TCP19
Mini
Word Length: 16-bit
Operating System: DOS
Languages Supported: Fortran
Minimum Memory: 32K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 200
Maximum On-Line Storage: 9.6G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $65,000
Maintenance: On-site
Date First Installed: January 1976
Number Installed to Date: 40
(See Vendor Profile Page V-20)

TELEGENIX, INC.
MTDS
Mini
Specific Application: Process Control
Word Length: 16-bit
Operating System: MVS, SPL
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 9
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $50,000 to $100,000
Maintenance: On-site, Third-party
Date First Installed: 1974
(See Vendor Profile Page V-20)

TELEGENIX, INC.
SOS-V31
Mini
Word Length: 16-bit
Operating System: SPC, ITEL, ENDOL
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 72K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 16
Maximum I/O Ports: 9
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $11,000 to $30,000
Maintenance: On-site, Third-party

TELEVIDEO SYSTEMS, INC.
TS816/40
Small business
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, APL, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 50M bytes
Maximum I/O Ports: 19
Communications Protocols: Asynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $13,000
Maintenance: On-site
Date First Installed: 1981
(See Vendor Profile Page V-21)

TELEVIDEO SYSTEMS, INC.
TS1603
Small business
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C, Algol, Forth
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Communications Protocols: Asynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site

TEXAS INSTRUMENTS, INC.
BS SYSTEM 300
Small business
Word Length: 16-bit
Operating System: DX10
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 172M bytes
Maximum I/O Ports: 12
Communications Protocols: Bisynchronous
Distribution: End user

Minis/Small Business Computers

Vendor Sales Terms: Purchase, Lease
Purchase Price: $9 995 to $21,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $90
Date First Installed: November 1982
(See Vendor Profile Page V-21)

TEXAS INSTRUMENTS, INC.
BUSINESS SYSTEM 200 SERIES
Small business
Word Length: 16-bit
Operating System: DX10 MICRD
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $8 495 to $9 495
Maintenance: On-site
Average Maintenance Fee: $75
Date First Installed: September 1982

TEXAS INSTRUMENTS, INC.
BUSINESS SYSTEM 600 SERIES
Small business
Word Length: 16-bit
Operating System: DX10
Languages Supported: Cobol, Fortran, Basic, RPG
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 777M bytes
Maximum I/O Ports: 98
Communications Protocols: Bisynchronous, SDLC/SNA, X.25, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $22,500 to $40,000
Maintenance: On-site
Average Maintenance Fee: $300
Date First Installed: September 1982

TEXAS INSTRUMENTS, INC.
BUSINESS SYSTEM 800 SERIES
Small business
Word Length: 16-bit
Operating System: DX10
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 952M bytes
Communications Protocols: 2780/3780, Bisynchronous, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $51 000 to $86,000
Maintenance: On-site
Average Maintenance Fee: $500
Date First Installed: January 1983

TEXAS INSTRUMENTS, INC.
DS990/15
Mini
Word Length: 16-bit
Operating System: DX10, DNOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 985M bytes
Maximum I/O Ports: 32
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $50,000
Maintenance: On-site
Average Maintenance Fee: $500
Date First Installed: 1981

TEXAS INSTRUMENTS, INC.
DS990/1
Small business
Word Length: 16-bit
Operating System: DX10
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 2
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site
Date First Installed: 1978

TEXAS INSTRUMENTS, INC.
DS990/2
Small business
Word Length: 16-bit
Operating System: TX5, DX5
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 5M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $17 000
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: 1979

TEXAS INSTRUMENTS, INC.
DS990/3
Mini
Word Length: 16-bit
Operating System: DX7
Languages Supported: Cobol
Minimum Memory: 96K bytes
Maximum Memory: 352K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 35M bytes
Maximum I/O Ports: 13
Communications Protocols: Bisynchronous, 3780/2780
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $21,000
Maintenance: On-site
Date First Installed: 1982
(See Vendor Profile Page V-00)

TEXAS INSTRUMENTS, INC.
DS990/4
Mini
Word Length: 16-bit
Operating System: DX10, DNOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 19M bytes
Communications Protocols: HDLC, Asynchronous, Bisynchronous, SDLC, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $35 000
Maintenance: On-site
Date First Installed: 1979

TEXAS INSTRUMENTS, INC.
DS990/5
Mini
Word Length: 16-bit
Operating System: DX10, DNOS
Languages Supported: RPG, Fortran, Basic, Pascal, Cobol
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 172M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $34,000
Maintenance: On-site
Average Maintenance Fee: $300
Date First Installed: 1982

TEXAS INSTRUMENTS, INC.
DS990/7
Mini
Word Length: 16-bit
Operating System: DX10, DNOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 192M bytes
Maximum I/O Ports: 32
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $34,000 to $37,000
Maintenance: On-site
Average Maintenance Fee: $350

TEXAS INSTRUMENTS, INC.
DS990/9
Mini
Word Length: 16-bit
Operating System: DX10, DNOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 192M bytes
Maximum I/O Ports: 32
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease

TO COMPUTER SYSTEMS/C-25

Purchase Price: $39,000 to $42,000
Maintenance: On-site
Average Maintenance Fee: $400
Date First Installed: 1981

TEXAS INSTRUMENTS, INC.
DS990/26
Mini
Word Length: 16-bit
Operating System: DX10, DNOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 30
Maximum On-Line Storage: 965M bytes
Maximum I/O Ports: 46
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $70,000
Maintenance: On-site
Average Maintenance Fee: $650
Date First Installed: 1979

TEXAS INSTRUMENTS, INC.
DS890/29
Mini
Word Length: 16-bit
Operating System: DX10, DNOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 30
Maximum On-Line Storage: 192M bytes
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Date First Installed: 1979

TEXAS INSTRUMENTS, INC.
DS990/36
Mini
Word Length: 18-bit
Operating System: DX10, DNOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 30
Maximum On-Line Storage: 965M bytes
Maximum I/O Ports: 46
Communications Protocols: Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $87,000 to $125,000
Maintenance: On-site
Average Maintenance Fee: $800
Date First Installed: 1979

THREE RIVERS COMPUTER CORP.
PERQ
Mini
Word Length: 16-bit
Operating System: POS, UNIX
Languages Supported: Fortran, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: No
Maximum On-Line Storage: 64M bytes
Communications Protocols: Asynchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $24,000 to $32,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $200
Date First Installed: August 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-21)

TORCH COMPUTERS LTD.
CF110
Small business
Word Length: Dual 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 96K bytes
Maximum Memory: 96K bytes
Multiple Users: No
Maximum On-Line Storage: 800K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,995 to $8,995
Maintenance: Third-party
Average Maintenance Fee: $90
Date First Installed: November 1982
(See Vendor Profile Page V-21)

TORCH COMPUTERS LTD.
CF110F
Small business
Word Length: Dual 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 96K bytes
Maximum Memory: 96K bytes
Multiple Users: No
Maximum On-Line Storage: 800K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,995 to $5,995
Maintenance: Third-party
Average Maintenance Fee: $60
Date First Installed: November 1982

TORCH COMPUTERS LTD.
CF110HD
Small business
Word Length: Dual 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 96K bytes
Maximum Memory: 96K bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 2
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,995 to $9,995
Maintenance: Third-party
Average Maintenance Fee: $100
Date First Installed: November 1982

TOSHIBA AMERICA, INC.
T-250/S
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, Microsoft Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,995 to $9,190
Maintenance: On-site, Third-party
Date First Installed: 1982
(See Vendor Profile Page V-21)

TRW-FUJITSU CORP.
FUJITSU 8500
Mini
Word Length: 16-bit
Operating System: ONIOS
Languages Supported: Cobol, Fortran, RPG
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 48
Maximum On-Line Storage: 800M bytes
Maximum I/O Ports: 8
Communications Protocols: Bisynchronous, SDLC, HDLC, RG 3780
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $65,000
Maintenance: TRW
Date First Installed: November 1981
(See Vendor Profile Page V-21)

UNICOMP CORP.
PIXEL 80
Mini
Specific Application: Data Entry, POS polling, CAD/CAM
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, C
Minimum Memory: 512K bytes
Maximum Memory: 6M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 720M bytes
Maximum I/O Ports: 18
Communications Protocols: Synchronous
Distribution: End user, OEM, Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $14,800
Maintenance: On-site
Average Maintenance Fee: $200
(See Vendor Profile Page V-22)

UNICOMP CORP.
PIXEL 80Q
Mini
Specific Application: CAD/CAM, Graphics
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Ada
Minimum Memory: 512K bytes
Maximum Memory: 6M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 720M bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous, Synchronous
Distribution: End user, OEM, Third-party
Purchase Price: $19,900
Maintenance: On-site
Average Maintenance Fee: $200

VICOM SYSTEMS, INC.
VICOM
Mini
Specific Application: Image processor
Word Length: 16-bit
Operating System: VERSA DOS, UNIDOS
Languages Supported: Fortran, Pascal, Assembly
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 600M bytes
Communications Protocols: Asynchronous, DMA
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $35,000 to $75,000
Maintenance: On-site
Average Maintenance Fee: $350
Date First Installed: June 1981
Number Installed to Date: 150
(See Vendor Profile Page V-21)

VICTOR TECHNOLOGIES, INC.
SERIES 9000-912000
Small business
Word Length: 16-bit
Operating System: CP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Basic
Minimum Memory: 12K bytes
Maximum Memory: 896K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,995
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $50
Date First Installed: May 1982
Number Installed to Date: 10,000 — 50,000
(See Vendor Profile Page V-21)

VICTOR TECHNOLOGIES, INC.
SERIES 9000-913000
Small business
Word Length: 16-bit
Operating System: CP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Basic
Minimum Memory: 128K bytes
Maximum Memory: 896K bytes
Multiple Users: No
Maximum On-Line Storage: 11.6M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,995
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $50
Date First Installed: November 1982

VICTOR TECHNOLOGIES, INC.
SERIES 9000-914000
Small business
Word Length: 16-bit

Minis/Small Business Computers

Operating System: CP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Basic
Multiple Users: No
Maximum On-Line Storage: 2 4M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,995
Maintenance: On-site, Third-party
Average Maintenance Fee: $60
Date First Installed: May 1982
Number Installed to Date: 10,000 — 50,000

WANG LABORATORIES, INC.
2200 LVP
Small business
Word Length: 8-bit
Operating System: BASIC 2
Languages Supported: Cobol, Basic
Minimum Memory: 32K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 483M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $8,500 to $100,000
Maintenance: On-site
Date First Installed: 1976
Number Installed to Date: 10,000 — 50,000
(See Vendor Profile Page V-21)

WANG LABORATORIES, INC.
2200 LVPC
Small business
Word Length: 8-bit
Operating System: BASIC 2
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 483M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $9,000 to $126,000
Maintenance: On-site
Average Maintenance Fee: $350
Date First Installed: 1976
Number Installed to Date: 10,000 — 50,000

WANG LABORATORIES, INC.
2200 MVP
Small business
Word Length: 8-bit
Operating System: BASIC 2
Languages Supported: Cobol, Basic
Minimum Memory: 32K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 13
Maximum On-Line Storage: 483M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,300 to $112,000
Maintenance: On-site
Date First Installed: 1978
Number Installed to Date: 10,000 — 50,000

WANG LABORATORIES, INC.
2200 MVPC
Small business
Word Length: 8-bit
Operating System: BASIC 2
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 13
Maximum On-Line Storage: 483M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $6,000 to $130,000
Maintenance: On-site
Average Maintenance Fee: $145
Date First Installed: 1978
Number Installed to Date: 10,000 — 50,000

WANG LABORATORIES, INC.
2200 SVP
Small business
Word Length: 8-bit
Operating System: BASIC 2
Languages Supported: Cobol, Basic
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 4M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,500 to $11,400
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: 1977

WANG LABORATORIES, INC.
2200 VS50
Small business
Word Length: 16-bit
Operating System: VS/OS
Languages Supported: Cobol, Fortran, Basic, RPG, PL/1, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $33,000 to $500,000
Maintenance: On-site
Average Maintenance Fee: $1,000
Date First Installed: 1980
Number Installed to Date: 10,000 — 50,000

WANG LABORATORIES, INC.
2200 VS80
Small business
Word Length: 16-bit
Operating System: VS/OS
Languages Supported: Cobol, Fortran, Basic, RPG, PL/1, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 2 3G bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $33,000 to $500,000
Maintenance: On-site
Date First Installed: 1980
Number Installed to Date: 10,000 — 50,000

WANG LABORATORIES, INC.
2200 VS100
Small business
Word Length: 32-bit
Operating System: VS/OS
Languages Supported: Cobol, Fortran, Basic, RPG, PL/1, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 4 6G bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $100,000 to $500,000
Maintenance: On-site
Date First Installed: 1979
Number Installed to Date: 10,000 — 50,000

WANG LABORATORIES, INC.
PCSIII
Small business
Word Length: 8-bit
Operating System: BASIC 2
Languages Supported: Basic
Minimum Memory: 80K bytes
Maximum Memory: 80K bytes
Multiple Users: No
Maximum On-Line Storage: 4M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,000 to $55,000
Maintenance: On-site
Date First Installed: 1980

WANG LABORATORIES, INC.
VS80
Small business
Word Length: 32-bit
Operating System: VS/OS
Languages Supported: Cobol, Fortran, Basic, RPG, PL/1, Assembly
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous

TO COMPUTER SYSTEMS/C-27

Minis/Small Business Computers

Distribution: End user
Vendor Sales Terms: Purchase Lease
Purchase Price: $73,000
Maintenance: On-site

WICAT SYSTEMS, INC.
SYSTEM 160
Mini
Word Length: 16/32-bit
Operating System: UNIX, MCS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, C, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 4.5M bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 474M bytes
Maximum I/O Ports: 14
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $40,000
Maintenance: On-site
Date First Installed: November 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-22)

WICAT SYSTEMS, INC.
SYSTEM 200
Mini
Word Length: 16/32-bit
Operating System: UNIX, MCS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, C, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 5M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 474M bytes
Maximum I/O Ports: 38
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25,000 to $100,000
Maintenance: On-site
Average Maintenance Fee: $275
Date First Installed: September 1982
Number Installed to Date: 500 — 1,000

WICAT SYSTEMS, INC.
SYSTEM 300
Mini
Specific Application: School Administration
Word Length: 16/32-bit
Operating System: UNIX, MCS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, C, Assembler
Minimum Memory: 3M bytes
Maximum Memory: 3M bytes
Multiple Users: Yes, 30
Maximum On-Line Storage: 80M bytes
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $75,000
Maintenance: On-site

WINTEK CORP
SPRINT 68
Small business
Specific Application: General Purpose
Word Length: 8-bit
Operating System: WIZRD, UCSD-P SYSTEM
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 32K bytes
Maximum Memory: 56K bytes
Multiple Users: No
Maximum On-Line Storage: 56K bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,649 to $4,149
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $25
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-22)

XEROX CORP
16/6
Small business
Word Length: 8/18-bit
Operating System: CP/M 86, CP/M 80, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,395 to $5,295
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: 1983
(See Vendor Profile Page V-22)

XEROX CORP
5010
Small business
Word Length: 16-bit
Languages Supported: Cobol, Basic
Minimum Memory: 192K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Maintenance: On-site, Return to manufacturing facility

ZERO ONE COMPUTER CORP.
ZERO ONE 100
Small business
Word Length: 8-bit
Operating System: TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C, Forth
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $50,000
Maintenance: Return to manufacturing facility
Date First Installed: July 1982
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-22)

ZILOG, INC.
8000
Small business
Word Length: 16-bit
Operating System: ZEUS, UNIX
Languages Supported: Cobol, Fortran, Pascal, C, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Bisynchronous, X.25, Znet 2
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $60,000
Maintenance: Third-party
Date First Installed: July 1981
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-22)

ZOBEX
S-11
Small business
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 400K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,000 to $12,000
Maintenance: Return to manufacturing facility
Date First Installed: October 1980
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-22)

ZONIC CORP.
ZONIC 6085
Mini
Specific Application: Digitizing
Operating System: RSX-11
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 6
Communications Protocols: DRV-11
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $32,000 to $200,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1982
(See Vendor Profile Page V-22)

Discover the personal business computer with a

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DECISION MATE V

The Personal Business Computer with a Heart.

ACCESS MATRIX CORP.
ACCESS COMPUTER
Portable
Word Length: 8-bit
Operating System: CP/M
Languages Supported: M-Basic, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 370K bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,495
Maintenance: Return to manufacturing facility, Third-party
(See Vendor Profile Page V-1)

ACTION COMPUTER ENTERPRISE
DISCOVERY 500
Micro
Word Length: 8/16-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, Pascal, RPG, APL, PL/1, Bliss, Coral
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 7
Maximum On-Line Storage: 120M bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous, Synchronous, SDLC
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,590 to $9,295
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $100
Date First Installed: January 1983
Number Installed to Date: 250
(See Vendor Profile Page V-1)

ACTION COMPUTER ENTERPRISE
DISCOVERY 1600
Micro
Word Length: 8/16-bit
Operating System: CP/M, DPC
Languages Supported: Cobol, RPG, Fortran, Basic, Basic plus, Basic plus 2, Pascal, APL, PL/1, Bliss, Coral
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 120M bytes
Maximum I/O Ports: 25
Communications Protocols: Asynchronous, Synchronous, SDLC
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $17,000
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $100
Date First Installed: April 1979
Number Installed to Date: 2,000

ACTION INSTRUMENTS CO., INC.
SC 2
Micro
Specific Application: Industrial Control
Word Length: 8-bit
Operating System: ZIBL
Languages Supported: Basic
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,000
Maintenance: On-site
Date First Installed: 1978
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-1)

ACTU SYSTEMS
CPU 3000
Micro
Word Length: 8/16-bit
Operating System: FLEX
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 500K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user; Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $7,875
Maintenance: On-site
Average Maintenance Fee: $85
Date First Installed: January 1983
Number Installed to Date: 75
(See Vendor Profile Page V-1)

ACTU SYSTEMS
POS 18
Micro
Word Length: 8/16-bit
Operating System: OS-9
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $35,000 to $90,000
Maintenance: On-site
Average Maintenance Fee: $250
Date First Installed: June 1981
Number Installed to Date: 310

ACUREX CORP.
AUTODATA TEN/50
Micro
Specific Application: Data Acquisition
Word Length: Dual 8-bit
Languages Supported: Basic
Minimum Memory: 10K bytes
Maximum Memory: 184K bytes
Multiple Users: No
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $16,000 to $200,000
Maintenance: Remote diagnostics; Return to manufacturing facility
Date First Installed: 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-1)

ADAC CORP.
BOSYS
Micro
Word Length: 16-bit
Operating System: RSX-11M
Languages Supported: Fortran, Basic, Pascal, ADLIBRT, ADLIBRS
Multiple Users: Yes
Maximum I/O Ports: 8
Distribution: End user
Purchase Price: $10,000 to $50 000
Maintenance: On-site; Return to manufacturing facility
Average Maintenance Fee: $200
Date First Installed: 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-1)

ADAC CORP.
PROSYS I
Micro
Word Length: 16-bit
Operating System: RSX-11M
Languages Supported: Fortran, Basic, Pascal, Prosys
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum I/O Ports: 8
Distribution: End user
Purchase Price: $10,000 to $50,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $200
Date First Installed: 1981
Number Installed to Date: 10 — 50

ADVANCED DIGITAL PRODUCTS, INC.
PDO-3
Micro
Word Length: 16-bit
Operating System: UCSD-P
Languages Supported: Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 30M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $10,000
Maintenance: On-site, Moore Business Systems
Average Maintenance Fee: $80
Date First Installed: 1980
Number Installed to Date: 100
(See Vendor Profile Page V-1)

ADVANCED DIGITAL PRODUCTS, INC.
PDO-23
Micro
Word Length: 16-bit
Operating System: UCSD-P
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Multiple Users: Yes, 8
Maximum On-Line Storage: 600M bytes
Communications Protocols: HDLC, Asynchronous, Synchronous, X.25, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,000 to $10,000
Maintenance: On-site, Moore Business Systems
Average Maintenance Fee: $80
Date First Installed: 1980
Number Installed to Date: 25

ADVANCED INFORMATICS, LTD.
INFORMER II
Micro
Word Length: 8-bit
Operating System: CP/M, Basic
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 240K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,500 to $2,500
Maintenance: On-site
Date First Installed: June 1978
Number Installed to Date: 150
(See Vendor Profile Page V-1)

ADVANCED INFORMATICS, LTD.
INFORMER III
Micro
Word Length: 8-bit
Operating System: CP/M, Basic
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,500 to $3,500
Maintenance: On-site
Date First Installed: July 1978
Number Installed to Date: 175

ADVANCED MICRO DEVICES
AMSYS 29/18A
Micro
Word Length: 8-bit
Operating System: CP/M, AMDOS
Languages Supported: Assembly
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 960M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $26,000
Maintenance: Remote diagnostics, Return to manufacturing facility, Third-party
Average Maintenance Fee: $300
Date First Installed: August 1982
Number Installed to Date: 750
(See Vendor Profile Page V-1)

ADVANCED MICRO DEVICES
PS-1000
Micro
Word Length: 16-bit
Operating System: HEMENWAY
Languages Supported: Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3

Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,000
Maintenance: Remote diagnostics Return to manufacturing facility, Third-party
Date First Installed: October 1982
Number Installed to Date: 10 — 50

ADVANCED MICRO DEVICES
RTE 16 REAL-TIME EMULATOR
Micro
Word Length: 8-bit
Operating System: CP/M, AMDOS
Languages Supported: Assembly
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $19,000
Maintenance: Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: January 1982

ADVANCED MICRO DIGITAL CORP.
SUPERQUAD
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, Pascal
Minimum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 600M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,200 to $10,000
Maintenance: On-site
Date First Installed: February 1980
Number Installed to Date: 7,000
(See Vendor Profile Page V-1)

ADVANCED MICRO DIGITAL CORP.
SUPERSTAR
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,000 to $8,000
Maintenance: On-site
Date First Installed: April 1983

ADVANCED MICRO DIGITAL CORP.
SUPERSLAVE
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS, MP/M
Minimum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 600M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,200 to $10,000
Maintenance: On-site
Date First Installed: February 1980
Number Installed to Date: 700,000

ADVANCED MICRO DIGITAL CORP.
SUPERSYSTEM
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO/DOS, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 80M bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,300 to $6,000
Maintenance: On-site
Average Maintenance Fee: $45
Date First Installed: November 1981
Number Installed to Date: 570

ALBERT COMPUTER, INC.
ALBERT
Micro
Word Length: 8-bit
Operating System: DOS 3.3, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 192K bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 540K bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,595 to $2,500
Maintenance: Return to manufacturing facility
(See Vendor Profile Page V-1)

ALPHA MICRO SYSTEMS, INC.
AM-1092
Micro
Word Length: 16-bit
Operating System: AMOS/L, CP/M
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 3.2G bytes
Communications Protocols: 2780/3780
Distribution: Third-party
(See Vendor Profile Page V-1)

ALSPA COMPUTER, INC.
ACI-1
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,000
Maintenance: On-site, Return to manufacturing facility, Distributor
Average Maintenance Fee: $125
Date First Installed: July 1981
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-1)

ALTOS COMPUTER SYSTEMS, INC.
586 SERIES
Desktop
Word Length: 16-bit
Operating System: XENIX/UNIX, CP/M, MP/M, PICK
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous, Synchronous, SDLC/SNA
Distribution: OEM
Purchase Price: $7,990
Maintenance: TRW, Inc
Date First Installed: May 1983
(See Vendor Profile Page V-1)

ALTOS COMPUTER SYSTEMS, INC.
ACS 8000 SERIES
Personal
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 208K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 116M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Synchronous, CP/NET
Distribution: OEM
Purchase Price: $2,840 to $18,990
Maintenance: TRW, Inc.
Number Installed to Date: 10,000 — 50,000

ALTOS COMPUTER SYSTEMS, INC.
ACS 8600 SERIES
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 724K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous
Distribution: OEM
Purchase Price: $12,500 to $14,500
Maintenance: TRW, Inc.
Number Installed to Date: 10,000 — 50,000

ALTOS COMPUTER SYSTEMS, INC.
ACS 68000
Micro
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, Focus
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 80M bytes
Communications Protocols: Asynchronous
Distribution: OEM
Purchase Price: $14,500 to $16,500
Maintenance: TRW, Inc
Date First Installed: 1982

ALTOS COMPUTER SYSTEMS, INC.
ALTOS 580 SERIES
Micro
Word Length: 8-bit
Operating System: MP/M II; CP/M, OASIS
Minimum Memory: 192K bytes
Multiple Users: Yes, 3
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,990 to $6,490
Maintenance: TRW, Inc.
Date First Installed: January 1983

ALTOS COMPUTER SYSTEMS, INC.
ALTOS SERIES 6
Micro
Word Length: 16-bit
Operating System: CP/M 86, MP/M II
Languages Supported: Cobol; Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, SDLC/SNA
Distribution: OEM
Purchase Price: $2,990 to $12,990
Maintenance: TRW, Inc.
Number Installed to Date: 10,000 — 50,000

AMF LOGIC SCIENCES, INC.
HSR 11-8
Micro
Specific Application: CAD/CAM Graphics
Word Length: 16-bit
Minimum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 8M bytes
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $14,500
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: 1978
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-1)

The TeleVideo Personal Computer. Not the first. Just the best.

When we set out to build the new TeleVideo Personal Computer, we decided to do it better than anyone else. It wasn't easy. All we had to do was design a special casing that keeps heat away from sensitive electronics, with no fan for no noise and greater reliability, put in a big clear 14" screen that tilts for your comfort, include a detachable keyboard so advanced it eliminates typing fatigue, throw in extra storage (for an unformatted total of 1 MB), and put it all in a very smooth and easy-to-use integrated package. We call it the TS 803.

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AM INTERNATIONAL, INC.
COMP EDIT 5310
Micro
Specific Application: Electronic Typesetting
Word Length: 8-bit
Operating System: CP/M
Minimum Memory: 80K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $17,995
Maintenance: On-site
Date First Installed: 1977
(See Vendor Profile Page V-1)

AM INTERNATIONAL, INC.
COMP/EDIT 5410
Micro
Specific Application: Electronic Typesetting
Word Length: 8-bit
Operating System: CP/M
Minimum Memory: 80K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $19,995
Maintenance: On-site
Date First Installed: 1977

AM INTERNATIONAL, INC.
COMP/EDIT 5810
Micro
Specific Application: Electronic Typesetting
Word Length: 8-bit
Operating System: CP/M
Minimum Memory: 80K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $22,995
Maintenance: On-site
Date First Installed: 1977

AM INTERNATIONAL, INC.
COMP/EDIT 5900
Micro
Specific Application: Electronic Typesetting
Word Length: 8-bit
Operating System: CP/M
Minimum Memory: 80K bytes
Maximum Memory: 512K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $24,990
Maintenance: On-site
Date First Installed: 1977

AM INTERNATIONAL, INC.
COMP/EDIT 6400
Micro
Specific Application: Electronic Typesetting
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $29,990 to $37,000
Maintenance: On-site
Date First Installed: 1982

AM INTERNATIONAL, INC.
EPICS
Micro
Specific Application: Electronic Typesetting
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 704K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $28,000 to $45,000
Maintenance: On-site, General Electric Co
Average Maintenance Fee: $47
Date First Installed: March 1983

AM INTERNATIONAL, INC.
EPICS COMPUTER SYSTEM
Micro
Specific Application: Electronic Typesetting
Word Length: 8-bit
Operating System: Proprietary, CP/M
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Maximum On-Line Storage: 10M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site
Date First Installed: 1977

AMNET, INC.

NUCLEUS 6000
Multi-Micro
Specific Application: Packet Switching
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: PL/1
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum I/O Ports: 1,024
Communications Protocols: Asynchronous, Synchronous, Bisynchronous; SDLC, X.25, HDLC; X.75
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $100,000 to $500,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Digital Equipment Corp
Date First Installed: January 1983
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-2)

Additional information provided for by vendor

The Nucleus 6000 is a modular multiprocessor packet-switching exchange which operates as a full-function node in public or private data networks, a packet assembler/disassembler, a remote concentrator or as a gateway processor to public data networks. Supports four 1024 ports, full CCITT X.25, dynamic routing plus many protocols.

AMTEL SYSTEMS CORP.
MESSENGER I
Micro
Specific Application: Electronic Messaging
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Proprietary
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 380K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $10,000
Maintenance: Third-party
Average Maintenance Fee: $70
Date First Installed: August 1979
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-2)

AMTEL SYSTEMS CORP.
MESSENGER II LEVEL 1
Micro
Specific Application: Electronic Messaging
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 320K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $20,000
Maintenance: Third-party
Average Maintenance Fee: $70
Date First Installed: April 1982

AMTEL SYSTEMS CORP.
MESSENGER II LEVEL 2
Micro
Specific Application: Electronic Messaging
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 320K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $30,000
Maintenance: Third-party
Average Maintenance Fee: $70
Date First Installed: October 1981
Number Installed to Date: 25

ANDROMEDA SYSTEMS, INC.
11/S
Micro
Word Length: 16-bit
Operating System: UNIX, RT11, RSX-11M
Languages Supported: Fortran, Basic, Basic plus 2, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 9
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,500 to $24,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1977
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-2)

ANDROMEDA SYSTEMS, INC.
11/H
Micro
Word Length: 16-bit
Operating System: UNIX, SX, RSX-11M
Languages Supported: Fortran, Basic, Basic plus 2, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $15,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1978
Number Installed to Date: 10 — 50

ANDROMEDA SYSTEMS, INC.
11/M
Micro
Word Length: 16-bit
Operating System: UNIX, TSX+; RSX-11M
Languages Supported: Fortran, Basic, Basic plus 2, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 19
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $14,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1979
Number Installed to Date: 50 — 100

ANDROTEK/DMI
RIGEL II
Micro
Specific Application: Motor Testing
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 48K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, RS-232
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $20,000 to $50,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: 1980
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-2)

APPLE COMPUTER, INC.
APPLE IIE
Desktop
Word Length: 8-bit
Operating System: DOS 3.3
Languages Supported: Fortran, Basic, Pascal, CP/M, Lisp
Minimum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,395
Maintenance: Return to manufacturing facility, Third-party
(See Vendor Profile Page V-2)

APPLE COMPUTER, INC.
APPLE III
Desktop
Word Length: 8-bit
Operating System: SOS, CP/M
Languages Supported: Basic, Pascal, CP/M, Assembler
Minimum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 560K bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $3,495
Maintenance: Return to manufacturing facility, RCA
Date First Installed: November 1980
Number Installed to Date: 10,000 — 50,000

APPLE COMPUTER, INC.
INFORMATION ANALYST
Personal
Word Length: 8-bit
Operating System: SOS
Languages Supported: Fortran; Basic, Pascal, Assembler, Applesoft
Minimum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 560K bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $3,495
Maintenance: Return to manufacturing facility, Third-party

APPLE COMPUTER, INC.
LISA
Desktop
Word Length: 16-bit
Operating System: DOS
Languages Supported: Basic, Pascal, Assembler
Minimum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,995
Maintenance: RCA Corp
Date First Installed: 1983

APPLIED DIGITAL DATA SYSTEMS, INC.
MULTIVISION I
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 48K bytes
Multiple Users: No
Maximum On-Line Storage: 700K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,395
Maintenance: NCR, Corp
Date First Installed: 1980
(See Vendor Profile Page V-2)

APPLIED DYNAMICS INTERNATIONAL
AD SYSTEM 10
Micro
Specific Application: Modeling/Simulation
Word Length: 8-bit
Languages Supported: MPS 10
Minimum Memory: 384K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum I/O Ports: 258
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $200,000 to $250,000
Maintenance: On-site
Average Maintenance Fee: $2,300
Date First Installed: 1977
Number Installed to Date: 100
(See Vendor Profile Page V-2)

APPLIED SYSTEMS CORP.
ASC/80
Micro
Specific Application: Graphics, Communications
Word Length: 8/16-bit
Operating System: CP/M, CP/M 86, DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 16K bytes
Maximum Memory: 500K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous, SDLC/SNA
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,000 to $10,000
Maintenance: Return to manufacturing facility
Date First Installed: 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-2)

APPLIED SYSTEMS CORP.
ASC/86
Supermicro
Specific Application: Graphics
Word Length: 16/32-bit
Operating System: MP/M 86, UNIX, OASIS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 200M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous, SDLC/SNA
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,000 to $25,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1982
Number Installed to Date: 100 — 500

APPLIED TECHNOLOGY VENTURES, INC.
4900
Micro
Word Length: 8-bit
Languages Supported: PL/1, Assembly
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $6,000 to $33,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: December 1981
(See Vendor Profile Page V-2)

APPLIED TECHNOLOGY VENTURES, INC.
FOX II 800/S100/S100
Micro
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 80K bytes
Maximum Memory: 80K bytes
Multiple Users: No
Maximum On-Line Storage: 16M bytes
Communications Protocols: RS-232C
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,500 to $18,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $120
Date First Installed: December 1982
Number Installed to Date: 10 — 50

APPLIED TECHNOLOGY VENTURES, INC.
J300
Micro
Operating System: JACQUARD
Languages Supported: Basic, Assembly
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 320M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $75,000
Maintenance: On-site
Date First Installed: June 1975
Number Installed to Date: 2,500

APPLIED TECHNOLOGY VENTURES, INC.
J500
Micro
Operating System: JACQUARD
Languages Supported: Basic, Assembly
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 48M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $75,000
Maintenance: On-site
Date First Installed: June 1975
Number Installed to Date: 2,300

APPLIED TECHNOLOGY VENTURES, INC.
J600
Micro
Operating System: JACQUARD
Languages Supported: Basic, Assembly
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 48M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $75,000
Maintenance: On-site
Date First Installed: June 1975
Number Installed to Date: 230

ARC AUTOMATION SERVICE, INC.
ARC MICRO PAC 8 SINGLE
Micro
Word Length: Tn 8-bit
Operating System: CP/M 2.2
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 5.8M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility
Date First Installed: January 1982

Number Installed to Date: 100 — 500
(See Vendor Profile Page V-2)

ARC AUTOMATION SERVICE, INC.
ARC MICRO/PAC I MULTI
Micro
Word Length: Tri 8-bit
Operating System: MP/M II
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 3.2M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility
Date First Installed: January 1982
Number Installed to Date: 100 — 500

ARC AUTOMATION SERVICE, INC.
ARC MICRO/PAC I SINGLE
Micro
Word Length: Tri 8-bit
Operating System: CP/M 2.2
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 1.6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility
Date First Installed: January 1982
Number Installed to Date: 100 — 500

ARC AUTOMATION SERVICE, INC.
ARC MICRO/PAC II MULTI
Micro
Word Length: Tri 8-bit
Operating System: MP/M II
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 11.6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility
Date First Installed: January 1982
Number Installed to Date: 100 — 500

ARC AUTOMATION SERVICE, INC.
ARC MICRO/PAC III MULTI
Micro
Word Length: Tri 8-bit
Operating System: MP/M II
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 21.6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility
Date First Installed: January 1982
Number Installed to Date: 100 — 500

ARC AUTOMATION SERVICE, INC.
ARC MICRO/PAC III SINGLE
Micro
Operating System: CP/M 2.2
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 10.8M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility
Date First Installed: January 1982
Number Installed to Date: 100 — 500

ARCHIVES, INC.
ARCHIVE BUSINESS SYSTEM
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,500 to $6,500
Maintenance: Third-party
Date First Installed: January 1978
Number Installed to Date: 3,000
(See Vendor Profile Page V-2)

ARCHIVES, INC.
ARCHIVES IV
Desktop
Word Length: 8-bit
Operating System: MP/M
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party

ASTRONAUTICS CORP. OF AMERICA
INTELLIGENT TERMINAL
Desktop
Word Length: 16-bit
Operating System: RMX86, XENIX, CP/M 86
Languages Supported: Fortran; Pascal, PL/M 86
Minimum Memory: 8K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 35M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $9,000
Maintenance: On-site
Date First Installed: October 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-2)

AUGUST SYSTEMS, INC.
CDAS 300
Micro
Specific Application: Process Control
Word Length: 16-bit
Operating System: RTTS
Languages Supported: Fortran; Assembler
Minimum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 7,200
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $130,000 to $150,000
Maintenance: Return to manufacturing facility
Date First Installed: November 1982
Number Installed to Date: 7
(See Vendor Profile Page V-2)

AUGUST SYSTEMS, INC.
PCS 300
Micro
Specific Application: Process Control
Word Length: 16-bit
Operating System: RTTS
Languages Supported: Assembler
Minimum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 7,200
Communications Protocols: Asynchronous; Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $125,000 to $250,000
Maintenance: Return to manufacturing facility
Date First Installed: November 1981
Number Installed to Date: 9

AUTECH CORP.
DACMASTER 6000
Micro
Specific Application: Data Acquisition
Word Length: 16/32-bit
Operating System: AIDE
Languages Supported: Cobol; Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 192K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $32,000 to $55,000
Maintenance: Remote diagnostics; Return to manufacturing facility
Date First Installed: 1983
(See Vendor Profile Page V-3)

AUTOMATIC CONTROL ELECTRONICS
80 EC
Desktop
Specific Application: Control System
Word Length: 8-bit
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 64M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000 to $100,000
Maintenance: On-site; Return to manufacturing facility
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-3)

AUTOMATIC CONTROL ELECTRONICS
80 EC-II
Desktop
Specific Application: Process Control
Word Length: 8-bit
Languages Supported: Assembler
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000 to $100,000
Maintenance: On-site, Return to manufacturing facility
Number Installed to Date: 50 — 100

AUTOMATIC CONTROL ELECTRONICS
80 EC PM
Desktop
Word Length: 8-bit
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000 to $100,000
Maintenance: On-site, Return to manufacturing facility
Number Installed to Date: 50 — 100

AUTOMATIC CONTROL ELECTRONICS
80 EC PM-II
Desktop
Word Length: 8-bit
Languages Supported: Assembler
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000 to $100,000
Maintenance: On-site; Return to manufacturing facility

AUTOMATIC CONTROL ELECTRONICS
80/90
Micro
Word Length: 16-bit
Languages Supported: Cobol
Minimum Memory: 256K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 28
Maximum I/O Ports: 28
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000 to $200,000
Maintenance: On-site, Return to manufacturing facility
Number Installed to Date: 50 — 100

AUTOMATIC TERMINAL INFORMATION SYSTEMS, INC.
ATIS 4000
Micro
Word Length: 8-bit
Operating System: ATIS
Languages Supported: Atis
Minimum Memory: 4K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 14M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,600 to $2,800
Maintenance: Return to manufacturing facility
Date First Installed: 1980
Number Installed to Date: 7
(See Vendor Profile Page V-3)

AUTOMATIC TERMINAL INFORMATION SYSTEMS, INC.
ATIS 8000
Desktop
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility

AYDIN CORP.
5217 PCT
Micro
Specific Application: Graphics
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $6,000 to $7,000
Maintenance: On-site, Return to manufacturing facility
(See Vendor Profile Page V-3)

AYDIN CORP.
AYCAD
Micro
Specific Application: CAD
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Fortran, Pascal
Minimum Memory: 1M bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 320M bytes
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $75,000
Maintenance: On-site
Date First Installed: December 1982
Number Installed to Date: 14

AYDIN CORP.
AYCON 15
Micro
Specific Application: Graphics
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Maximum On-Line Storage: 3.5M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $11,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1973

AYDIN CORP.
AYCON 16
Micro
Specific Application: Graphics
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes, 8
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase; Lease
Purchase Price: $14,000 to $100,000
Maintenance: On-site, Return to manufacturing facility

AYDIN CORP.
AYCON 17
Micro
Specific Application: Graphics
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.5M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,000 to $4,000
Maintenance: On-site, Return to manufacturing facility

AZURDATA, INC.
SCORE PAD
Micro
Word Length: 8-bit
Operating System: AZURDATA
Languages Supported: Pascal, Assembler
Minimum Memory: 32K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 128K bytes
Maximum I/O Ports: 2
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,800 to $3,300
Maintenance: On-site, Return to manufacturing facility
Date First Installed: September 1980
Number Installed to Date: 1,200
(See Vendor Profile Page V-3)

BARRETO & ASSOCIATES, INC.
MICRO MASTER
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $9,500 to $12,500
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: June 1980
Number Installed to Date: 5
(See Vendor Profile Page V-3)

BARRINGTON INTERNATIONAL CORP.
E'LITE
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic; Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 7
Maximum On-Line Storage: 112M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,000
Maintenance: Return to manufacturing facility; Dealers
Average Maintenance Fee: $90
Date First Installed: June 1982
Number Installed to Date: 100
(See Vendor Profile Page V-3)

BILLINGS COMPUTER CORP.
BC-500
Desktop
Word Length: 8-bit
Operating System: DOS
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 56K bytes
Maximum Memory: 56K bytes
Multiple Users: No
Maximum On-Line Storage: 1.5M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase; Rental
Purchase Price: $2,500
Maintenance: Remote diagnostics
Date First Installed: April 1982
(See Vendor Profile Page V-3)

BILLINGS COMPUTER CORP.
BC-600
Micro
Word Length: 8-bit
Operating System: BOS
Languages Supported: Cobol; Fortran, Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 18
Maximum On-Line Storage: 480M bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental
Purchase Price: $1,500 to $15,000
Maintenance: Remote diagnostics
Date First Installed: April 1982

BUCK ENGINEERING, INC.
AA 355
Micro
Word Length: 8-bit
Languages Supported: Basic; Assembler
Minimum Memory: 1K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 325K bytes
Maximum I/O Ports: 5
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,712 to $8,000
Maintenance: Return to manufacturing facility
Date First Installed: June 1977
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-3)

BUNKER RAMO INFORMATION SYSTEMS
BR1720
Micro
Specific Application: High-Speed Data Communication
Word Length: 16-bit
Operating System: Proprietary
Minimum Memory: 384K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 7
Maximum I/O Ports: 1
Communications Protocols: SLP
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $85,000
Maintenance: On-site
Average Maintenance Fee: $1,100
Date First Installed: April 1981
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-3)

Micros

SURR BROWN RESEARCH CORP.
CS430
Micro
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 96K bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,000 to $14,000
Maintenance: Return to manufacturing facility
Date First Installed: March 1981
(See Vendor Profile Page V-3)

SURR BROWN RESEARCH CORP.
CS450
Micro
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 136K bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $16,000
Maintenance: Return to manufacturing facility
Date First Installed: January 1980

SURR BROWN RESEARCH CORP.
CS480
Micro
Word Length: 8-bit
Operating System: UCSD-P
Languages Supported: Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 645K bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $18,000
Maintenance: Return to manufacturing facility
Date First Installed: April 1981

CADLINC, INC.
CIM STATION
Engineering Workstation
Specific Application: CAD/CAM
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Fortran; C
Minimum Memory: 3M bytes
Multiple Users: No
Maximum On-Line Storage: 13.5M bytes
Maximum I/O Ports: 4
Communications Protocols: Ethernet
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $25,000
Maintenance: On-site
Date First Installed: November 1982
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-3)

CADO SYSTEMS CORP.
CAT III
Desktop
Word Length: 8-bit
Operating System: SB-80
Languages Supported: Cadol
Minimum Memory: 48K bytes
Maximum Memory: 48K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $22,000
Maintenance: Third-party
Date First Installed: September 1982
(See Vendor Profile Page V-3)

CADO SYSTEMS CORP.
SYSTEM 20/24
Micro
Word Length: 8-bit
Operating System: CADO
Languages Supported: Cadol
Minimum Memory: 48K bytes
Maximum Memory: 48K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 104M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $16,000 to $29,000
Maintenance: Third-party
Date First Installed: May 1980

CADO SYSTEMS CORP.
SYSTEM 20/28
Micro
Word Length: 8-bit
Operating System: CADO
Languages Supported: Cadol
Minimum Memory: 96K bytes
Maximum Memory: 96K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 104M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $30,000 to $45,000
Maintenance: Third-party
Date First Installed: May 1980
Number Installed to Date: 100 — 500

CADO SYSTEMS CORP.
TIGER ATS-64
Supermicro
Word Length: 16-bit
Languages Supported: Cadol
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.1G bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $50,000 to $105,000
Maintenance: Third-party
Date First Installed: November 1982

CALLAN DATA SYSTEMS
UNISTAR 100
Supermicro
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Ada
Minimum Memory: 256K bytes
Maximum Memory: 2M bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Bisynchronous, X.25, Ethernet
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,950
Maintenance: ITT, Courier
Average Maintenance Fee: $82
Date First Installed: August 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-4)

CALLAN DATA SYSTEMS
UNISTAR 200
Supermicro
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Ada
Minimum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Bisynchronous, X.25, Ethernet
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $13,950
Maintenance: ITT, Courier
Average Maintenance Fee: $110
Date First Installed: March 1983

CANON U.S.A., INC.
AS-100
Micro
Word Length: 16-bit
Operating System: CP/M 86, MS-DOS, OASIS 1S
Languages Supported: Cobol, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,000 to $5,000
Maintenance: Distributors
Date First Installed: March 1983
Number Installed to Date: Less than 10
(See Vendor Profile Page V-4)

CARDKEY SYSTEMS
1010
Micro
Specific Application: Access Control
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 4K bytes
Maximum Memory: 4K bytes
Multiple Users: No
Maximum I/O Ports: 1
Communications Protocols: Proprietary
Distribution: End user; Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,430
Maintenance: On-site, Return to manufacturing facility
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-4)

CARDKEY SYSTEMS
D800
Micro
Specific Application: Access Control
Word Length: 8-bit
Minimum Memory: 4K bytes
Maximum Memory: 4K bytes
Multiple Users: Yes
Maximum I/O Ports: 2
Communications Protocols: Proprietary
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,000 to $7,400
Maintenance: Return to manufacturing facility
Number Installed to Date: 100 — 500

CARDKEY SYSTEMS
D1000
Micro
Specific Application: Access Control
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 32K bytes
Maximum Memory: 48K bytes
Multiple Users: Yes
Maximum I/O Ports: 2
Communications Protocols: Proprietary
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $100
Number Installed to Date: 100 — 500

CARDKEY SYSTEMS
D1200
Micro
Specific Application: Access Control
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 32K bytes
Maximum Memory: 48K bytes
Multiple Users: Yes
Maximum I/O Ports: 2
Communications Protocols: Proprietary
Distribution: End user; Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $150
Number Installed to Date: 100 — 500

CARDKEY SYSTEMS
D1500
Micro
Specific Application: Access Control
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 48K bytes
Maximum Memory: 48K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 1

Communications Protocols: Proprietary
Distribution: End user; OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,500 to $10,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $500

CARDKEY SYSTEMS
D2000
Micro
Specific Application: Access Control
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 2
Communications Protocols: Proprietary
Distribution: End user, OEM, Third-party
Vendor Sales Terms: Purchase; Lease
Purchase Price: $16,500
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $600

CARDKEY SYSTEMS
D4000
Micro
Specific Application: Access Control
Word Length: 16-bit
Operating System: Proprietary
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 16
Communications Protocols: Proprietary
Distribution: End user, OEM, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $49,500
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $1,000

CARDKEY SYSTEMS
PASS
Micro
Specific Application: Access Control
Word Length: 16-bit
Operating System: Proprietary
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 300M bytes
Maximum I/O Ports: 64
Communications Protocols: Proprietary
Distribution: End user, OEM, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $70,000
Maintenance: On-site, Return to manufacturing facility

CASIO, INC.
FP 1000/1190
Personal
Word Length: 8-bit
Operating System: CA-BASIC
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 2
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,500
Maintenance: On-site
(See Vendor Profile Page V-4)

CASIO, INC.
FX9000P
Personal
Word Length: 8-bit
Operating System: CA-BASIC
Languages Supported: Basic
Minimum Memory: 4K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,000

CENTRAL DATA CORP.
COMPAT/23
Desktop
Word Length: 16-bit
Operating System: UNIX, RSX-11, RT-11; RSTS
Languages Supported: Cobol, Fortran, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $15,000 to $20,000
Maintenance: Indeserv
Average Maintenance Fee: $150
Date First Installed: December 1981
(See Vendor Profile Page V-4)

CENTRAL DATA CORP.
COMPAT/123
Desktop
Word Length: 16-bit
Operating System: UNIX, RSX-11; RT-11, RSTS
Languages Supported: Cobol, Fortran, Pascal, C
Minimum Memory: 256K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 48M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $13,000 to $15,000
Maintenance: Indeserv
Average Maintenance Fee: $130

CENTURION COMPUTER CORP.
CENTURION 6400
Micro
Word Length: 8-bit
Languages Supported: Cobol, Basic, CPL, Adart, JCL
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 576M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price $39,442
Date First Installed: October 1979
(See Vendor Profile Page V-4)

CENTURION COMPUTER CORP.
CENTURION 8500
Micro
Word Length: 8-bit
Languages Supported: Cobol, Basic, CPL, Adart, JCL
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 288K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,500
Date First Installed: October 1979

CHOICE RETAIL SYSTEMS, INC.
THE LINK
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Basic, C-Basic
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 320M bytes
Communications Protocols: X.25, Asynchronous, HDLC, Hasp
Distribution: End user; Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $16,000 to $200,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $350
(See Vendor Profile Page V-4)

Additional information provided for by vendor

Plug-compatible minicomputer offering for Basic. Four customers Nationwide distribution, maintenance and support are offered.

Communications HOS and front end for support of point-to-point network of such store and forward devices as cash registers, personal computers, factory data clocks, intelligent terminals and so on.

CHROMATICS, INC.
CG SERIES
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 96K bytes
Multiple Users: No
Maximum On-Line Storage: 1.5M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user; OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $6,000 to $13,000
Maintenance: On-site, Return to manufacturing facility
(See Vendor Profile Page V-4)

CHROMATICS, INC.
CGC 7900
Micro
Word Length: 16-bit
Operating System: IDRIS
Languages Supported: Fortran, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 81M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $12,000 to $80,000
Maintenance: On-site, Return to manufacturing facility

CIE SYSTEMS, INC.
680/10
Desktop
Word Length: 16/32-bit
Operating System: REGULUS, UNIX, RM/COS SMC/BASIC
Languages Supported: Cobol, Fortran Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site, Third-party
(See Vendor Profile Page V-4)

CMC INTERNATIONAL
SUPERNET 5
Micro
Word Length: 8-bit
Operating System: TURBO DOS
Languages Supported: Cobol Fortran, Basic Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Synchronous, Bisynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6 995 to $22,000
Maintenance: On-site
Date First Installed: August 1982
(See Vendor Profile Page V-4)

CMC INTERNATIONAL
SYSTEM 1000 SUPER 5
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic Pascal, APL, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No

Maximum On-Line Storage: 7M bytes
Maximum I/O Ports: 2
Communications Protocols: Synchronous, Bisynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $7,995
Maintenance: On-site
Average Maintenance Fee: $60
Date First Installed: May 1982

CMC INTERNATIONAL
SYSTEM 1000-1
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 700K bytes
Maximum I/O Ports: 2
Communications Protocols: Synchronous, Bisynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,000 to $6,000
Maintenance: On-site
Average Maintenance Fee: $60
Date First Installed: May 1982
Number Installed to Date: 3,000

CMC INTERNATIONAL
SYSTEM 1000-2
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol; Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.5M bytes
Maximum I/O Ports: 2
Communications Protocols: Synchronous, Bisynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $7,995
Maintenance: On-site
Average Maintenance Fee: $60
Date First Installed: May 1982

CODATA SYSTEMS CORP.
3300
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic plus, Pascal, APL
Minimum Memory: 320K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes, 17
Maximum On-Line Storage: 64M bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,800 to $13,500
Maintenance: Return to manufacturing facility, Bunker Ramo Corp.
Date First Installed: February 1983
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-4)

CODEX CORP.
CDX-268/21
Desktop
Specific Application: Word Processing
Word Length: 8-bit
Operating System: IS/OS
Languages Supported: Cobol, Basic
Minimum Memory: 192K bytes
Maximum Memory: 384K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 30M bytes
Communications Protocols: Asynchronous, 3270, SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $6,995 to $10,000
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: May 1983
(See Vendor Profile Page V-4)

CODEX CORP.
CDX-268/24
Desktop
Word Length: 8-bit
Operating System: IS/OS
Languages Supported: Cobol, Basic
Minimum Memory: 192K bytes
Maximum Memory: 384K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 4M bytes
Communications Protocols: Bisynchronous, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $8,000
Maintenance: On-site
Average Maintenance Fee: $80
Date First Installed: 1982

CODEX CORP.
CDX-268/44
Desktop
Word Length: 8-bit
Operating System: IS/DOS
Languages Supported: Cobol, Basic
Minimum Memory: 192K bytes
Maximum Memory: 384K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Communications Protocols: Bisynchronous, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $12,995 to $18,000
Maintenance: On-site
Average Maintenance Fee: $135
Date First Installed: September 1982

COGENT DATA TECHNOLOGIES
DATABASE MACHINE
Micro
Word Length: 16-bit
Operating System: MS-DOS, CP/M, PC-DOS
Minimum Memory: 192K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 20M bytes
Communications Protocols: Ethernet
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,150
Maintenance: Return to manufacturing facility
Date First Installed: August 1983
(See Vendor Profile Page V-4)

COLONIAL DATA SERVICES CORP.
SB80/4
Micro
Word Length: 8-bit
Operating System: MULTI/NET
Languages Supported: Cobol; Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 104M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,400 to $22,000
Maintenance: On-site
(See Vendor Profile Page V-4)

COLUMBIA DATA PRODUCTS, INC.
964
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 1.8M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: September 1979
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-4)

COLUMBIA DATA PRODUCTS, INC.
1500
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 10.3M bytes
Maximum I/O Ports: 7.
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,500 to $7,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: June 1981
Number Installed to Date: 500 — 1,000

COLUMBIA DATA PRODUCTS, INC.
F64
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2.4M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,495
Maintenance: On-site, Return to manufacturing facility
Date First Installed: February 1980
Number Installed to Date: 100 — 500

COLUMBIA DATA PRODUCTS, INC.
M64
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 400K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,249
Maintenance: On-site, Return to manufacturing facility
Date First Installed: December 1979
Number Installed to Date: 500 — 1,000

COMARK CORP.
DISKTOR M-4
Micro
Word Length: 16-bit
Operating System: MS-DOS; MP/M 86, CP/M 86, Concurrent CP/M
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 16M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 300M bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $25,000
Maintenance: Return to manufacturing facility
Date First Installed: December 1982
(See Vendor Profile Page V-5)

COMMODORE BUSINESS MACHINES, INC.
64
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 880K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous

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Distribution: Third-party
Purchase Price: $595
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: August 1982
(See Vendor Profile Page V-5)

COMMODORE BUSINESS MACHINES, INC.
EXECUTIVE 64
Portable
Word Length: 8-bit
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 340K bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility, Third-party

COMMODORE BUSINESS MACHINES, INC.
PET 4032
Desktop
Word Length: 8-bit
Operating System: OS, DOS
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 7M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $995
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: 1981

COMMODORE BUSINESS MACHINES, INC.
PET 8032
Desktop
Word Length: 8-bit
Operating System: OS, DOS
Minimum Memory: 32K bytes
Maximum Memory: 96K bytes
Multiple Users: No
Maximum On-Line Storage: 7M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,495
Maintenance: TRW, Inc

COMMODORE BUSINESS MACHINES, INC.
SUPER PET
Desktop
Word Length: 8-bit
Operating System: DOS
Languages Supported: Cobol; Fortran, Basic, Pascal, APL
Minimum Memory: 96K bytes
Maximum Memory: 96K bytes
Multiple Users: No
Maximum On-Line Storage: 7M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,995
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: July 1981
Number Installed to Date: 10,000 — 50,000

COMMODORE BUSINESS MACHINES, INC.
VIC 20
Desktop
Word Length: 8-bit
Operating System: DOS
Languages Supported: Basic
Maximum Memory: 32K bytes
Multiple Users: No
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $299
Maintenance: On-site, TRW, Inc
Date First Installed: June 1981
Number Installed to Date: More than 100,000

COMPAL COMPUTER SYSTEMS, INC.
8200
Desktop
Word Length: 16-bit
Operating System: MS-DOS, CP/M, XENIX
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 32M bytes
Maximum I/O Ports: 60
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $23,500
Maintenance: On-site
Date First Installed: January 1979
Number Installed to Date: 1,000
(See Vendor Profile Page V-5)

COMPAL COMPUTER SYSTEMS, INC.
ELECTRIC BRIEFCASE
Portable
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $4,500
Maintenance: On-site
Date First Installed: September 1982
Number Installed to Date: 100
(See Vendor Profile Page V-5)

COMPAL COMPUTER SYSTEMS, INC.
EZTYPE
Desktop
Word Length: 16-bit
Operating System: CP/M; MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 60
Communications Protocols: Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,695 to $8,995
Maintenance: On-site
Date First Installed: March 1980
Number Installed to Date: 300

COMPAQ COMPUTER CORP.
COMPAQ
Personal
Word Length: 16-bit
Operating System: CP/M 86, T SYSTEM, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995
Date First Installed: January 1983
(See Vendor Profile Page V-5)

COMPUCORP
600 SERIES
Desktop
Word Length: 8-bit
Operating System: ZEBRA
Languages Supported: Fortran, Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,995 to $39,000
Maintenance: Third-party
Average Maintenance Fee: $100
Date First Installed: April 1979
Number Installed to Date: 10,000 — 50,000
(See Vendor Profile Page V-5)

COMPUCORP
700 SERIES
Desktop
Word Length: 8-bit
Operating System: ZEBRA
Languages Supported: Fortran, Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,995 to $48,000
Maintenance: Third-party
Average Maintenance Fee: $150
Date First Installed: July 1981

COMPUGRAPHIC CORP.
MCS
Micro
Specific Application: Typesetting
Word Length: 16-bit
Operating System: CP/M 86
Multiple Users: Yes, 8
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $13,000 to $1,000,000
Maintenance: On-site
Date First Installed: June 1981
(See Vendor Profile Page V-5)

COMPUMOTOR CORP.
150 SERIES INDEXERS
Micro
Word Length: 8-bit
Multiple Users: No
Maximum I/O Ports: 45
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $500
Maintenance: On-site
Date First Installed: January 1980
Number Installed to Date: 800
(See Vendor Profile Page V-5)

COMPUMOTOR CORP.
172 SERIES INDEXERS
Micro
Word Length: 8-bit
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $600 to $1,150
Maintenance: On-site
Date First Installed: January 1981
Number Installed to Date: 700

COMPUMOTOR CORP.
1800 SERIES INDEXERS
Micro
Word Length: 16-bit
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum I/O Ports: 30
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,095 to $1,450
Maintenance: On-site

COMPUMOTOR CORP.
2100 SERIES INDEXERS
Micro
Word Length: 8-bit
Multiple Users: No
Maximum I/O Ports: 18
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $795 to $1,630
Maintenance: On-site
Date First Installed: September 1981
Number Installed to Date: 1,000

COMPUPRO CORP.
816/A
Desktop
Word Length: 8/16-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Basic, PL/1
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,495 to $8,995
Maintenance: On-site
Date First Installed: April 1982
(See Vendor Profile Page V-5)

COMPUPRO CORP.
816/B
Desktop
Operating System: CP/M, MP/M
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, Assembly
Minimum Memory: 256K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,665
Maintenance: On-site
Date First Installed: 1982

COMPUTER COMMUNICATIONS SPECIALISTS, INC.
TASK 1000
Micro
Specific Application: Data Collection
Word Length: 8-bit
Languages Supported: EDL
Minimum Memory: 32K bytes
Maximum Memory: 48K bytes
Multiple Users: Yes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $4,800
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, MST Corp
Date First Installed: December 1980
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-5)

COMPUTER DEVICES, INC.
DOT 3000
Personal
Word Length: 16-bit
Operating System: MS-DOS, CP/M
Languages Supported: Cobol; Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 704K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 574K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $5,995
Maintenance: Return to manufacturing facility
(See Vendor Profile Page V-5)

COMPUTER HARDWARE, INC.
4106
Micro
Word Length: 8-bit
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: End user
Purchase Price: $1,150 to $1,250
Date First Installed: June 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-5)

COMPUTER HARDWARE, INC.
4106A
Micro
Word Length: 8-bit
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,750 to $1,850
Maintenance: On-site, Return to manufacturing facility, Third-party
Date First Installed: June 1981
Number Installed to Date: 100 — 500

COMPUTER HARDWARE, INC.
4108
Micro
Word Length: 8-bit
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,250 to $2,350
Maintenance: On-site, Return to manufacturing facility
Date First Installed: June 1981
Number Installed to Date: 100 — 500

COMPUTER HARDWARE, INC.
4111
Micro
Specific Application: Time Clock
Word Length: 8-bit
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,295 to $2,395
Maintenance: On-site, Return to manufacturing facility, Third-party
Date First Installed: June 1981
Number Installed to Date: 100 — 500

COMPUTER HARDWARE, INC.
4121
Micro
Word Length: 8-bit
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: Third-party
Purchase Price: $4,495 to $4,595
Maintenance: On-site, Return to manufacturing facility, Third-party
Date First Installed: June 1981
Number Installed to Date: 100 — 500

COMPUTER HARDWARE, INC.
4131
Micro
Word Length: 8-bit
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,995 to $5,095
Maintenance: On-site, Return to manufacturing facility, Third-party
Date First Installed: June 1981
Number Installed to Date: 100 — 500

COMPUTER HARDWARE, INC.
4108
Micro
Word Length: 8-bit
Languages Supported: Cobol, Fortran, Pascal, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SNA
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $10,000
Maintenance: On-site, Return to manufacturing facility, Third-party
Date First Installed: 1981
Number Installed to Date: 50 — 100

CONTEMPORARY CONTROL SYSTEMS, INC.
SYSTEM 6000
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal PL/1
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 480K bytes
Maximum I/O Ports: 2
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,000 to $6,000
Maintenance: Return to manufacturing facility
Date First Installed: 1981
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-6)

CONVERGENT TECHNOLOGIES, INC.
AWS COLOR GRAPHIC
Micro
Specific Application: Graphics
Word Length: 16-bit
Operating System: CTOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes 16
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, SDLC/SNA, 3270 RJE
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $11,000 to $14,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: January 1983
(See Vendor Profile Page V-6)

CONVERGENT TECHNOLOGIES, INC.
AWS TURBO
Desktop
Word Length: 16-bit
Operating System: CTOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, SDLC/SNA, 3270 RJE
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,500 to $12,000
Maintenance: Return to manufacturing facility, OEM
Date First Installed: November 1981
Number Installed to Date: 500 — 1,000

CONVERGENT TECHNOLOGIES, INC.
IWS
Desktop
Word Length: 16-bit
Operating System: CTOS
Languages Supported: Cobol; Fortran, Basic, Pascal, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 16
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 22
Communications Protocols: SDLC/SNA, 3270 RJE
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,000 to $20,000
Maintenance: Return to manufacturing facility
Date First Installed: October 1980
Number Installed to Date: 500 — 1,000

CONVERGENT TECHNOLOGIES, INC.
IWS GRAPHICS
Micro
Specific Application: Graphics
Word Length: 16-bit
Operating System: CTOS
Languages Supported: Cobol;

Fortran, Basic; Pascal; Assembler
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 22
Communications Protocols: 3270; RJE, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $22,000
Maintenance: Remote diagnostics
Date First Installed: October 1982

CORONA DATA SYSTEMS, INC.
CORONA PC-1
Desktop
Word Length: 16-bit
Operating System: MS-DOS, CP/M 86
Languages Supported: Cobol; Fortran, Basic; Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 320K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,595
Maintenance: Third-party
(See Vendor Profile Page V-6)

CORONA DATA SYSTEMS, INC.
CORONA PC-2
Desktop
Word Length: 16-bit
Operating System: MS-DOS, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995
Maintenance: Third-party

CORONA DATA SYSTEMS, INC.
CORONA PC HD
Desktop
Word Length: 16-bit
Operating System: MS-DOS, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal; PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,495
Maintenance: Third-party

CORONA DATA SYSTEMS, INC.
CORONA PORTABLE PPC1
Portable
Word Length: 16-bit
Operating System: MS-DOS, CP/M 86
Languages Supported: Cobol, Fortran, Basic; Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,395
Maintenance: Third-party

CORONA DATA SYSTEMS, INC.
CORONA PORTABLE PPC2
Portable
Word Length: 16-bit
Operating System: MS-DOS, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,795
Maintenance: Third-party

CORPORATE DATA SCIENCES, INC.
CDS-16
Micro
Word Length: 16-bit
Operating System: HOST, TROS
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 1K bytes
Multiple Users: Yes, 128
Maximum On-Line Storage: 10G bytes
Maximum I/O Ports: 128
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $50,000 to $100,000
Maintenance: Return to manufacturing facility
Date First Installed: 1976
Number Installed to Date: 35
(See Vendor Profile Page V-6)

CORVUS SYSTEMS, INC.
CONCEPT WS I
Desktop
Word Length: 16-bit
Operating System: CCOS, CP/M, UNIX
Languages Supported: Fortran; Pascal C
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 13
Communications Protocols: Asynchronous, Synchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $7,500
Maintenance: On-site, Decision Data
Average Maintenance Fee: $75
Date First Installed: May 1982
Number Installed to Date: 2,000
(See Vendor Profile Page V-6)

CORVUS SYSTEMS, INC.
CONCEPT WS II
Desktop
Word Length: 16-bit
Operating System: CCOS, CP/M, UNIX
Languages Supported: Fortran, Basic, C
Minimum Memory: 512K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum I/O Ports: 13
Communications Protocols: Asynchronous, Synchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $9,000
Maintenance: On-site, Third-party
Average Maintenance Fee: $100
Date First Installed: May 1982

CORVUS SYSTEMS, INC.
CORVUS CONCEPT
Micro
Word Length: 16/32-bit
Operating System: CCOS, UCSD-P
Languages Supported: Fortran, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 73M bytes
Maximum I/O Ports: 7
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $9,000
Date First Installed: 19824

CORVUS SYSTEMS, INC.
CORVUS CONCEPT +
Micro
Word Length: 16/32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic plus, Pascal, C, ISO, SVS
Minimum Memory: 768K bytes
Maximum Memory: 768K bytes
Multiple Users: No
Maximum On-Line Storage: 73M bytes
Maximum I/O Ports: 7
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,995 to $10,000

CORVUS SYSTEMS, INC.
CORVUS UNIPLEX
Desktop
Word Length: 16/32
Operating System: UNIX
Minimum Memory: 512K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum On-Line Storage: 73M bytes
Maximum I/O Ports: 11
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase

COSMOS SYSTEMS, INC.
ANTARES
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol; Fortran, Basic plus, Pascal, C
Minimum Memory: 500K bytes
Multiple Users: Yes: 16
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25,000 to $28,000
Date First Installed: December 1982
(See Vendor Profile Page V-6)

COSMOS SYSTEMS, INC.
LYRA
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic plus, Pascal, C
Minimum Memory: 500K bytes
Multiple Users: Yes: 16
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,650
Maintenance: Third-party
Date First Installed: October 1982

COSMOS SYSTEMS, INC.
ORION
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol; Fortran, Basic plus, Pascal, C
Minimum Memory: 500K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 1.6G bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $50,000 to $65,000
Date First Installed: January 1983

CRC SYSTEMS, INC.
CR7
Micro
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic; Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 25M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, XNET
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,000
Maintenance: On-site
Date First Installed: 1983
(See Vendor Profile Page V-6)

CROMEMCO, INC.
C-10-SP
Micro
Word Length: 8-bit
Operating System: CDOS

Languages Supported: Cobol; Fortran; Basic; Basic plus; Lisp; Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 740K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,785 to $3,500
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: December 1982
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-6)

CROMEMCO, INC.
CS-1H
Micro
Word Length: 8-bit
Operating System: CDOS
Languages Supported: Cobol; Fortran; Basic; Basic plus; Lisp; Assembler
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,995 to $12,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: January 1981
Number Installed to Date: 500 — 1,000

CROMEMCO, INC.
CS1
Micro
Word Length: 8-bit
Operating System: CDOS
Languages Supported: Cobol; Fortran; Basic; Basic plus; Lisp; Assembler
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,995 to $10,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: June 1980
Number Installed to Date: 500 — 1,000

CROMEMCO, INC.
CS1D2
Micro
Word Length: 8/16
Operating System: CROMIX D
Languages Supported: Cobol; Fortran; Basic; Basic plus; Pascal; RPG; PL/1; C; Lisp; Assembler
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,995 to $12,000
Maintenance: Return to manufacturing facility, TRW, Inc.
Date First Installed: December 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CS1HD2
Micro
Word Length: 8/16
Operating System: CROMIX D
Languages Supported: Cobol; Fortran; Basic; Basic plus; Pascal; RPG; C; Lisp; Assembler
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,495 to $18,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: March 1983
Number Installed to Date: 50 — 100

CROMEMCO, INC.
CS1HD5E
Micro
Word Length: 8/16
Operating System: CROMIX D
Languages Supported: Cobol; Fortran; Basic; Basic plus; Pascal; RPG; C; Lisp; Assembler
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,495 to $19,000
Maintenance: Return to manufacturing facility, TRW, Inc.
Date First Installed: September 1982
Number Installed to Date: 500 — 1,000

CROMEMCO, INC.
CS-2
Micro
Word Length: 8-bit
Operating System: CDOS
Languages Supported: Cobol; Fortran; Basic; Basic plus; Lisp Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,695 to $15,000
Maintenance: Return to manufacturing facility, TRW, Inc.
Date First Installed: June 1976
Number Installed to Date: 10,000 — 50,000

CROMEMCO, INC.
CS2D2
Micro
Word Length: 8/16
Operating System: CROMIX D
Languages Supported: Cobol; Fortran; Basic; Basic plus; Pascal; RPG; C; Lisp; Assembler
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,995 to $12,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: December 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CS2D5E
Micro
Word Length: 8/16
Operating System: CROMIX-D
Languages Supported: Cobol; Fortran; Basic; Basic plus; Pascal; C; Lisp; Assembler
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,495 to $12,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: October 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CS2H
Micro
Word Length: 8/16
Operating System: CDOS
Languages Supported: Cobol; Fortran; Basic plus
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,495 to $14,000
Maintenance: Return to manufacturing facility; TRW, Inc.
Date First Installed: March 1983
Number Installed to Date: 50 — 100

CROMEMCO, INC.
CS2HD5E
Micro
Word Length: 8/16
Operating System: CROMIX D
Languages Supported: Cobol; Fortran; Basic; Basic plus; Pascal; RPG; C; Lisp; Assembler
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,995 to $20,000
Maintenance: Return to manufacturing facility; TRW, Inc
Date First Installed: March 1983
Number Installed to Date: 50 — 100

CROMEMCO, INC.
CS3
Micro
Word Length: 8-bit
Operating System: CDOS
Languages Supported: Cobol; Fortran; Basic plus; Lisp; Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 23M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,995 to $14,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: June 1977
Number Installed to Date: 10,000 — 50,000

CROMEMCO, INC.
CS3D2
Micro
Word Length: 8/16
Operating System: CROMIX D
Languages Supported: Cobol; Fortran; Basic; Basic plus; Pascal; RPG; C; Assembler; Lisp
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes
Maximum On-Line Storage: 23M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,995 to $14,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: December 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CS3D40E
Micro
Word Length: 8/16
Operating System: CROMIX D
Languages Supported: Cobol; Fortran; Basic; Basic plus; Pascal; RPG; C; Lisp; Assembler
Minimum Memory: 4M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 30
Communications Protocols: Asynchronous; Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase

Purchase Price: $27,495 to $38,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: June 1983

CROMEMCO, INC.
CS3D5E
Micro
Word Length: 8/16-bit
Operating System: CROMIX-D
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, C, Lisp, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 23M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,995 to $14,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: September 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CS3H
Micro
Word Length: 8-bit
Operating System: CDOS
Languages Supported: Cobol, Fortran, Basic plus, Lisp, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,495 to $14,000
Maintenance: Return to manufacturing facility, TRW, Inc.
Date First Installed: September 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CS3HD2
Micro
Word Length: 8/16-bit
Operating System: CROMIX-D
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, C, Lisp, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,495 to $20,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: December 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CS3HD40E
Micro
Word Length: 8/16-bit
Operating System: CROMIX-D
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, C, Lisp, Assembler
Minimum Memory: 4M bytes
Maximum Memory: 16M bytes
Multiple Users: Yes
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 30
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $29,995 to $45,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: June 1983

CROMEMCO, INC.
CS3HD5E
Micro
Word Length: 8/16-bit
Operating System: CROMIX-D
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, C, Lisp, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 22M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,495 to $24,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: September 1982

CROMEMCO, INC.
CSiD5E
Micro
Word Length: 8/16-bit
Operating System: CROMIX-D
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, C, Lisp, Assembler
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,495 to $12,000
Maintenance: Return to manufacturing facility, TRW, Inc.
Date First Installed: September 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CSiHD2
Micro
Word Length: 8/16-bit
Operating System: CROMIX-D
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, C, Lisp, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,495 to $16,000
Maintenance: Return to manufacturing facility, TRW, Inc.
Date First Installed: December 1982
Number Installed to Date: 100 — 500

CROMEMCO, INC.
CS-O
Micro
Specific Application: Process Control
Word Length: 8-bit
Operating System: ROM MONITOR
Languages Supported: ROM, Basic
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,295 to $5,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: January 1980
Number Installed to Date: 500 — 1,000

CROMEMCO, INC.
CS-OD
Micro
Word Length: 8-bit
Operating System: CDOS
Languages Supported: Cobol; Fortran, Basic, Basic plus, Lisp,Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $6,000
Maintenance: Return to manufacturing facility, TRW, Inc
Date First Installed: January 1980
Number Installed to Date: 500 — 1,000

CROMEMCO, INC.
Z2HGS
Micro
Word Length: 8-bit
Operating System: DCOLS
Languages Supported: Cobol; Fortran, Basic, Lisp, Assembler
Minimum Memory: 160K bytes
Maximum Memory: 160K bytes
Multiple Users: No
Maximum On-Line Storage: 13M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,995 to $20,000
Maintenance: Return to manufacturing facility; TRW, Inc.
Date First Installed: 1978
Number Installed to Date: 100 — 500

CWI TERMINAL CORP.
1503
Desktop
Word Length: 8-bit
Operating System: MDOS, HDOS; CP/M
Languages Supported: Cobol; Fortran, Basic, Assembler
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,000 to $2,500
Maintenance: Standard Register
Date First Installed: June 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-6)

CWI TERMINAL CORP.
1505
Desktop
Word Length: 8-bit
Operating System: MDOS, HDOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,000
Maintenance: Standard Register
Date First Installed: July 1981
Number Installed to Date: 5,000 — 10,000

CWI TERMINAL CORP.
1507
Desktop
Word Length: 8-bit
Operating System: MDOS, HDOS; CP/M
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,500 to $35,000
Maintenance: Standard Register
Date First Installed: August 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-6)

CWI TERMINAL CORP.
AMIGO
Personal
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic; Assembler
Minimum Memory: 44K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 5.8M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM

Vendor Sales Terms: Purchase
Purchase Price: $2,500 to $5,500
Maintenance: Third-party
Date First Installed: September 1982
Number Installed to Date: 50 — 100

CYBERSYSTEMS, INC.
CYKEY 9900
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Fortran, Basic, Pascal, Cyber Four
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 38
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $15,000
Maintenance: On-site
Date First Installed: January 1982
Number Installed to Date: 15
(See Vendor Profile Page V-6)

CYBERSTSTEMS, INC.
CYKEY 9990
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Fortran; Basic, Pascal, Cyber Four
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 38
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,300 to $15,000
Maintenance: On-site
Date First Installed: January 1982

CYBERSVSTEMS, INC.
DAC-5000
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Fortran, Basic, Pascal, Cyber Four
Minimum Memory: 2K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 34
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,500 to $15,000
Maintenance: On-site
Date First Installed: June 1876
Number Installed to Date: 500

CYB STSTEMS, INC.
MULTIBOX
Micro
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 420M bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $17,000 to $50,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: April 1982
Number Installed to Date: 200
(See Vendor Profile Page V-7)

DAISV SVSTEMS, CORP.
GATEMASTER
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Fortran, Pascal, PL/M
Minimum Memory: 1.5M bytes
Maximum Memory: 1.5M bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $100,000 to $125,000
Maintenance: On-site
Date First Installed: November 1982
Number Installed to Date: 10
(See Vendor Profile Page V-7)

DAIST SVSTEMS, CORP.
LOGICIAN
Micro
Specific Application: Engineering Workstation
Word Length: 16-bit
Languages Supported: Fortran; Pascal, C, PL/M
Minimum Memory: 764K bytes
Maximum Memory: 1.5M bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $75,000 to $85,000
Maintenance: On-site
Date First Installed: November 1981
Number Installed to Date: 120

DAISV SVSTEMS, CORP.
LOGICIAN D
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Fortran, Pascal, PL/M
Minimum Memory: 628K bytes
Maximum Memory: 3M bytes
Multiple Users: Yes
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $35,000 to $50,000
Maintenance: On-site
Date First Installed: November 1981
Number Installed to Date: 20

DATACOM CORP.
PCM SERIES
Desktop
Specific Application: Time-sharing; Messaging
Word Length: 16-bit
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: End user; Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $1,500 to $2,500
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, TRW, Inc
Average Maintenance Fee: $30
Date First Installed: January 1983
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-7)

DATA GENERAL CORP.
CS/5
Desktop
Word Length: 16-bit
Operating System: MP/OS
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $10,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $85
Date First Installed: May 1982
(See Vendor Profile Page V-7)

DATA GENERAL CORP.
ENTERPRISE 1000
Desktop
Word Length: 16-bit
Operating System: ENTERPRISE/OS
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 716K bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,000
Maintenance: On-site
Date First Installed: September 1981

DATA GENERAL CORP.
ENTERPRISE 3000
Desktop
Word Length: 16-bit
Operating System: ENTERPRISE/OS
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 13M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $14,000
Maintenance: On-site
Date First Installed: 1982

DATA GENERAL CORP.
MPT/100
Desktop
Word Length: 16-bit
Operating System: MP/OS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $18,000
Maintenance: On-site
Date First Installed: 1981

DATAMAC COMPUTER SVSTEMS, INC.
800 SERIES
Micro
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 18M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,000 to $4,000
Date First Installed: June 1982
(See Vendor Profile Page V-7)

DATAMAC COMPUTER SYSTEMS, INC.
1000 SERIES
Micro
Word Length: 16-bit
Operating System: MS-DOS, Concurrent CP/M, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 4M bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,500 to $10,000
Date First Installed: November 1982

DATA-MAX
UV1
Micro
Specific Application: Video Graphics
Word Length: 8-bit
Operating System: Z GRASS, CP/M
Languages Supported: Z Grass
Minimum Memory: 32K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 6M bytes
Maximum I/O Ports: 4
Distribution: End user
Vendor Sales Terms: Purchase

Purchase Price: $12,000 to $18,000
Maintenance: On-site
Date First Installed: 1980
Number Installed to Date: 120
(See Vendor Profile Page V-7)

DATA-MAX
UV1R
Micro
Specific Application: Video Graphics
Word Length: 8-bit
Operating System: Z GRASS, CP/M
Languages Supported: Z Grass
Minimum Memory: 32K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 6M bytes
Maximum I/O Ports: 4
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $20,000
Maintenance: On-site
Date First Installed: December 1982
Number Installed to Date: 3

DATAPOINT CORP.
1650
Micro
Word Length: 8-bit
Operating System: DOS
Languages Supported: Fortran, Basic plus, Databus
Minimum Memory: 32K bytes
Maximum Memory: 96K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $6,000 to $12,000
Maintenance: On-site
Average Maintenance Fee: $90
Date First Installed: October 1982
(See Vendor Profile Page V-7)

DATAPOINT CORP.
1800
Micro
Word Length: 8-bit
Operating System: DOS
Languages Supported: Cobol, Basic plus, RPG, Databus
Minimum Memory: 32K bytes
Maximum Memory: 120K bytes
Multiple Users: Yes, 9
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, 2780/3770
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $8,000 to $18,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: August 1975

DATAPOINT CORP.
6000
Micro
Word Length: 8-bit
Operating System: DOS
Languages Supported: Cobol, Basic, RPG, Databus, Datashare
Minimum Memory: 60K bytes
Maximum Memory: 248K bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 100M bytes
Communications Protocols: Asynchronous, Synchronous, Data Poll
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $8,500 to $11,000
Maintenance: On-site
Average Maintenance Fee: $85
Date First Installed: November 1977

DATA TSCHNOLOGY INDUSTRIES
ASSOCIATE
Micro
Word Length: 8-bit
Operating System: CP/M 3.0
Languages Supported: Cobol, PL/1, Fortran, Basic, Pascal, C, M-Basic
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 712K bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $2,500 to $3,000
Maintenance: Return to manufacturing facility, General Electric
Average Maintenance Fee: $25
Date First Installed: November 1978
Number Installed to Date: 2,500
(See Vendor Profile Page V-7)

DATA TECHNOLOGY INDUSTRIES
ASSOCIATE +
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 1.6G bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $3,000 to $4,000
Maintenance: On-site, Return to manufacturing facety, General Electric
Average Maintenance Fee: $30
Date First Installed: January 1971
Number Installed to Date: 1,200

DATA TECHNOLOGY INDUSTRISS
ASSOCIATE +5
Micro
Word Length: 8-bit
Operating System: CP/M 3.0; MP/M
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 6M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $4,000 to $4,500
Maintenance: On-site, Return to manufacturing facility; General Electric
Average Maintenance Fee: $40
Date First Installed: July 1979
Number Installed to Date: 400

DATA TECHNOLOGY INDUSTRISS
ASSOCIATE +10
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C, M-Basic
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 11M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $4,300 to $4,800
Maintenance: On-site, Return to manufacturing facility, General Electric
Average Maintenance Fee: $43

DATA TECHNOLOGY INDUSTRIES
ASSOCIATE +15
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $4,600 to $5,100
Maintenance: On-site, Return to manufacturing facility, General Electric
Average Maintenance Fee: $50

DATA TECHNOLOGY INDUSTRISS
SYSTEM 1S
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 5.6M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental
Purchase Price: $3,450
Maintenance: Return to manufacturing facility, General Electric
Average Maintenance Fee: $40
Date First Installed: January 1980
Number Installed to Date: 500 — 1,000

DATA TOOLS INTERNATIONAL, INC.
M/8
Micro
Word Length: 8-bit
Languages Supported: Basic; Pascal
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 96M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9,000 to $15,000
Date First Installed: June 1982
Number Installed to Date: 3
(See Vendor Profile Page V-7)

DATAVUE CORP.
80-200
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,795
Maintenance: Return to manufacturing facility, Indeserv
Date First Installed: November 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-7)

DATAVUE CORP.
80-300
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,500 to $9,000
Maintenance: Return to manufacturing facility, Indeserv
Average Maintenance Fee: $56
Date First Installed: January 1982
Number Installed to Date: 100 — 500

DATAVUE CORP.
80-400
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol;

Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 19M bytes
Maximum I/O Ports: 9
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility, Indeserv
Date First Installed: March 1983
Number Installed to Date: Less than 10

DATEC, INC.
ELECTRONIC NOTEBOOK
Portable
Word Length: 8-bit
Minimum Memory: 96K bytes
Maximum Memory: 504K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 408M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,295 to $8,000
Maintenance: On-site, Return to manufacturing facility
(See Vendor Profile Page V-7)

DATRICON CORP.
DV-9
Micro
Specific Application: Process Control
Word Length: 8-bit
Operating System: OS9
Languages Supported: Cobol, Basic, Pascal, C, D-Forth
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Purchase Price: $8,500 to $9 500
Maintenance: Return to manufacturing facility
Date First Installed: June 1982
Number Installed to Date: 15
(See Vendor Profile Page V-7)

DATRICON CORP.
FAC-PAC
Micro
Specific Application: Process Control
Word Length: 8-bit
Operating System: OS9
Languages Supported: Cobol, Basic, Pascal, C, D-Forth
Minimum Memory: 12K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,700 to $5,400
Maintenance: Return to manufacturing facility
Date First Installed: January 1983
Number Installed to Date: 4

DATRICON CORP.
GPC
Micro
Specific Application: Process Control
Word Length: 8-bit
Operating System: OS9
Languages Supported: Cobol, Basic, Pascal, PL/1, D-Forth
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $850 to $1,200
Maintenance: Return to manufacturing facility

DAVID COMPUTER, INC.
U.S.A.
203-ID
Micro
Word Length: 16-bit
Languages Supported: Cobol
Minimum Memory: 1 1M bytes
Maximum Memory: 1.1M bytes
Multiple Users: Yes, 4
Maximum I/O Ports: 2
Distribution: OEM
Date First Installed: September 1982
Number Installed to Date: 300
(See Vendor Profile Page V-7)

DAVID COMPUTER, INC.
U.S.A.
203-1R
Micro
Word Length: 16-bit
Languages Supported: Cobol, Basic, Machine Language
Minimum Memory: 1 1M bytes
Maximum Memory: 1 1M bytes
Multiple Users: Yes, 4
Maximum I/O Ports: 2
Distribution: OEM
Date First Installed: September 1982
Number Installed to Date: 150

DAVIDGE CORP.
DSS-4/6
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $995 to $5,000
Maintenance: Return to manufacturing facility
Date First Installed: November 1982
(See Vendor Profile Page V-7)

DELTA PRODUCTS, INC.
DELTA 1
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 85M bytes
Maximum I/O Ports: 5
Communications Protocols: None
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $10,000
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: January 1978
Number Installed to Date: 3,000
(See Vendor Profile Page V-8)

DELTA PRODUCTS, INC.
DELTA 2
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 160K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 85M bytes
Maximum I/O Ports: 9
Communications Protocols: None
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,000 to $12,000
Maintenance: On-site
Average Maintenance Fee: $120
Date First Installed: October 1978
Number Installed to Date: 1,500

DELTA PRODUCTS, INC.
DELTA 4
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 85M bytes
Maximum I/O Ports: 13
Communications Protocols: None
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $15,000
Maintenance: On-site
Average Maintenance Fee: $140
Date First Installed: October 1978
Number Installed to Date: 1,200

DELTA PRODUCTS, INC.
DP/NET
Micro
Word Length: 8-bit
Operating System: DP/NET, CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 85M bytes
Maximum I/O Ports: 64
Communications Protocols: None
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $50,000
Maintenance: On-site
Average Maintenance Fee: $200
Date First Installed: December 1981
Number Installed to Date: 100

DIGICOMP RESEARCH CORP.
DELPHI-100
Dual Processor
Word Length: 8-bit
Operating System: ROS, UNIX
Languages Supported: Cobol, Fortran, Basic, C, Ada
Minimum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 40M bytes
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $20,000
Maintenance: Third-party
Date First Installed: July 1982
(See Vendor Profile Page V-8)

DIGILOG, INC.
DIGILOG 1000
Desktop
Specific Application: Data Entry
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2G bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,495
Maintenance: On-site, Return to manufacturing facility, Indeserv
Date First Installed: November 1980
(See Vendor Profile Page V-8)

DIGILOG, INC.
DIGILOG 1500
Desktop
Specific Application: Data Entry
Word Length: 8-bit
Operating System: GP/M
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8 795
Maintenance: On-site, Return to manufacturing facility, Indeserv
Date First Installed: July 1981

DIGILOG, INC.
DIGILOG 1600
Desktop
Specific Application: Data Entry
Word Length: 8-bit
Operating System: TURBO DOS, CP/M
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 50M bytes
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9,795
Maintenance: On-site, Return to manufacturing facility, Indeserv
Date First Installed: March 1982

DIGITAL EQUIPMENT CORP.
THE RAINBOW 100
Personal
Word Length: 8/16
Operating System: CP/M 80, CP/M 86
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes

Multiple Users: No
Maximum On-Line Storage: 6.6M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,675
Maintenance: On-site
Average Maintenance Fee: $28
(See Vendor Profile Page V-8)

DIGITAL MICROSYSTEMS, INC.
DMS-3
Desktop
Word Length: 8/16
Operating System: CP/M 80, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 160M bytes
Communications Protocols: SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: Icot
Date First Installed: November 1980
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-8)

DIGITAL MICROSYSTEMS, INC.
DMS-4
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 160M bytes
Communications Protocols: SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: Icot
Date First Installed: October 1980
Number Installed to Date: 100 — 500

DIGITAL MICROSYSTEMS, INC.
DMS-15
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 160M bytes
Communications Protocols: SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: Icot
Date First Installed: December 1982

DIGITAL MICROSYSTEMS, INC.
DMS-5000
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 160M bytes
Communications Protocols: SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: Icot
Date First Installed: June 1982
Number Installed to Date: 500 — 1,000

DIGITAL PATHWAYS, INC.
DEFENDER
Micro
Specific Application: Security Access
Word Length: 8-bit
Languages Supported: Basic, Samsyn
Minimum Memory: 80K bytes
Maximum Memory: 80K bytes
Multiple Users: No
Maximum I/O Ports: 59
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $50,000
Maintenance: Return to manufacturing facility, Third-party
Average Maintenance Fee: $200
Date First Installed: March 1983
(See Vendor Profile Page V-8)

DIGITAL PATHWAYS, INC.
SLC II
Micro
Specific Application: Monitoring
Word Length: 8-bit
Languages Supported: Basic, Samsyn
Minimum Memory: 16K bytes
Maximum Memory: 80K bytes
Multiple Users: No
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,000 to $4,000
Maintenance: Return to manufacturing facility, Third-party
Average Maintenance Fee: $50
Date First Installed: June 1981
Number Installed to Date: 100 — 500

DIGITAL TECHNOLOGY INTERNATIONAL
580A-00
Micro
Word Length: 8-bit
Operating System: Z/DOS
Languages Supported: Basic, D-Base 2
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 70M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,595 to $10,159
Maintenance: On-site
(See Vendor Profile Page V-8)

DIGITAL TECHNOLOGY INTERNATIONAL
DTI 582A-888
Micro
Specific Application: Typesetting; Data Entry
Word Length: 8-bit
Operating System: CP/M, Z/DOS
Languages Supported: Basic, D-Base II
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $8,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: April 1980

DIGITAL TECHNOLOGY INTERNATIONAL
DTI 587P-88
Portable
Specific Application: Typesetting, Data Entry
Word Length: 8-bit
Operating System: CP/M, Z/DOS
Languages Supported: Basic, D-Base II
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Maximum On-Line Storage: 1.6M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: February 1983

DIGITAN SYSTEMS, INC.
DE/1000
Personal
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Basic, Pascal, PL/1, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,200
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $50
Date First Installed: 1978
(See Vendor Profile Page V-8)

DIGITAN SYSTEMS, INC.
DE/2000
Personal
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Basic, Pascal, PL/1, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $5,200
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $70
Date First Installed: 1978

DIGITAN SYSTEMS, INC.
DE/3000
Personal
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Basic, Pascal, PL/1, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 96M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $9,000
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $120
Date First Installed: 1979

DIRECT, INC.
DIRECT 1025
Micro
Word Length: 8-bit
Operating System: CP/M
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,950 to $4,550
Maintenance: On-site
Average Maintenance Fee: $48
Date First Installed: June 1982
Number Installed to Date: 500 — 1,000

DIRECT, INC.
DIRECT 1031
Micro
Word Length: 8-bit
Operating System: CP/M
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,450 to $4,250
Maintenance: On-site
Average Maintenance Fee: $48
Date First Installed: February 1983
Number Installed to Date: 500 — 1,000

DOCUTEL OLIVETTI CORP.
M20
Desktop
Word Length: 16-bit
Operating System: PCOS; CP/M, CP/M 86, MS-DOS
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 128K bytes

Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 11M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,965 to $4,600
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $46
Date First Installed: August 1982
(See Vendor Profile Page V-8)

DP BUSINESS SYSTEMS, INC.
DP 480
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M 2.0
Languages Supported: Cobol, Fortran, Basic, PL/1, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 384K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $14,950 to $20,950
Maintenance: On-site
Date First Installed: January 1983
Number Installed to Date: Less than 10
(See Vendor Profile Page V-8)

DP BUSINESS SYSTEMS, INC.
DP 1680/10
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M 2.0
Languages Supported: Cobol, Fortran, Basic, PL/1, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 1.1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 30M bytes
Maximum I/O Ports: 34
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $25,265 to $51,000
Maintenance: On-site
Average Maintenance Fee: $300
Date First Installed: August 1981
Number Installed to Date: 100 — 500

DP BUSINESS SYSTEMS, INC.
DP 1680/20
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M 2.0
Languages Supported: Cobol, Fortran, Basic, PL/1, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 1.1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 30M bytes
Maximum I/O Ports: 34
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase; Lease
Purchase Price: $36,950 to $86,000
Maintenance: On-site
Average Maintenance Fee: $510
Date First Installed: August 1981
Number Installed to Date: 100 — 500

DP BUSINESS SYSTEMS, INC.
DP 1680/30
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M 2.0
Languages Supported: Cobol, Fortran, Basic, PL/1, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 1.1M bytes
Multiple Users: Yes, 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $40,000 to $91,000
Maintenance: On-site
Average Maintenance Fee: $510
Date First Installed: August 1981
Number Installed to Date: 100 — 500

DUAL SYSTEMS CORP.
83/00
Micro
Specific Application: Industrial Controls
Word Length: 16/32-bit
Operating System: MAX BUG, RTK
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Forth
Minimum Memory: 32K bytes
Maximum Memory: 4M bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $4,440
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: September 1981
(See Vendor Profile Page V-8)

DUAL SYSTEMS CORP.
83/20
Micro
Word Length: 16/32-bit
Operating System: UNIX 7; SYSTEM III UNIX
Languages Supported: Cobol, Fortran, Basic plus, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 3.2M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $18,660
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: June 1982

DUAL SYSTEMS CORP.
83/80
Micro
Word Length: 16/32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus, C, Forth
Minimum Memory: 512K bytes
Maximum Memory: 3.2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 2.4G bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $22,200
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility

DURANGO SYSTEMS, INC.
700 SERIES
Desktop
Word Length: 8-bit
Operating System: DX85M, CP/M, MP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 4M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,536
Maintenance: On-site, Return to manufacturing facility, Third-party
Date First Installed: October 1978
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-8)

DURANGO SYSTEMS, INC.
900 SERIES
Desktop
Word Length: 8-bit
Operating System: DX85M, CP/M, MP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 96K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 4M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,450 to $9,950
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $108
Date First Installed: September 1980
Number Installed to Date: 1,000 — 5,000

DURANGO SYSTEMS, INC.
900 SERIES
Desktop
Word Length: 8-bit
Operating System: DX85M, CP/M, MP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 190K bytes
Multiple Users: Yes
Maximum On-Line Storage: 29M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,950 to $15,000
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $150
Date First Installed: March 1982
Number Installed to Date: 1,000 — 5,000

DYNABYTE
5605
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M, OASIS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 400K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 19M bytes
Maximum I/O Ports: 18
Communications Protocols: Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,000 to $12,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: 1981
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-9)

DYNABYTE
5710
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M, OASIS
Languages Supported: Cobol, Fortran
Minimum Memory: 64K bytes
Maximum Memory: 400K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 16
Communications Protocols: Bisynchronous
Distribution: Third-party
Purchase Price: $13,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: 1981
Number Installed to Date: 500 — 1,000

EAGLE COMPUTER, INC.
1600 SERIES
Desktop
Word Length: 16-bit
Operating System: MS-DOS, CP/M 86
Languages Supported: C-Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 107M bytes
Maximum I/O Ports: 11
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,995 to $10,995

Maintenance: Third-party
Date First Installed: December 1982
(See Vendor Profile Page V-9)

EAGLE COMPUTER, INC.
EAGLE II
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: C, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995
Maintenance: Third-party
Date First Installed: November 1981

EAGLE COMPUTER, INC.
EAGLE III
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: C, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,995
Maintenance: Third-party
Date First Installed: February 1982

EAGLE COMPUTER, INC.
EAGLE IV
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: C, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 107M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,995
Maintenance: Third-party
Date First Installed: February 1982

ECS MICROSYSTEMS, INC.
ECS 4000
Micro
Specific Application: Mainframe Emulation
Word Length: 8-bit
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 220K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,200
Maintenance: On-site
Date First Installed: December 1978
Number Installed to Date: 5,000
(See Vendor Profile Page V-9)

ECS MICROSYSTEME, INC.
ECS 4500
Micro
Specific Application: Mainframe Emulation
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 220K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000
Maintenance: On-site
Date First Installed: January 1980
Number Installed to Date: 2,000

E & H ELECTRONICS
EH-8100
Micro
Word Length: 12-bit
Languages Supported: Fortran, Basic
Minimum Memory: 4K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 64
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,000
Maintenance: Return to manufacturing facility
Date First Installed: January 1980
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-9)

ELECTRONIC CONTROL TECHNOLOGY, INC.
TT-8080.
Micro
Word Length: 8-bit
Operating System: CP/M, NORTHSTAR DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Purchase Price: $1,260
Maintenance: On-site
Date First Installed: 1977
(See Vendor Profile Page V-9)

ELECTRONIC CONTROL TECHNOLOGY, INC.
T-Z80
Micro
Word Length: 8-bit
Operating System: CP/M, NORTHSTAR DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,700
Maintenance: On-site
Date First Installed: 1977

E & L INSTRUMENTS, INC.
FOX
Micro
Specific Application: Training
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Machine Language
Minimum Memory: 6K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $500
Maintenance: On-site, Return to manufacturing facility
Date First Installed: August 1982
Number Installed to Date: 500
(See Vendor Profile Page V-9)

E & L INSTRUMENTS, INC.
MMD1
Micro
Specific Application: Training
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Machine Language
Minimum Memory: 1K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $600
Maintenance: Return to manufacturing facility
Date First Installed: May 1974
Number Installed to Date: 6,000

E & L INSTRUMENTS, INC.
MMD2
Micro
Specific Application: Training
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Machine Language
Minimum Memory: 4K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,500
Maintenance: Return to manufacturing facility
Date First Installed: September 1980
Number Installed to Date: 750

EPIC COMPUTER PRODUCTS, INC.
EPISODE 1148
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Assembler; Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 200K bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,324
Maintenance: Return to manufacturing facility; Third-party
Date First Installed: September 1981
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-9)

EPIC COMPUTER PRODUCTS, INC.
EPISODE 1248
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic; Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 400K bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,396
Maintenance: Return to manufacturing facility; Third-party
Date First Installed: September 1981
Number Installed to Date: 50 — 100

EPIC COMPUTER PRODUCTS, INC.
EPISODE 1296
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic; Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 800K bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,572
Maintenance: Return to manufacturing facility; Third-party
Date First Installed: September 1981
Number Installed to Date: 50 — 100

EPIC COMPUTER PRODUCTS, INC.
EPISODE 2148
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol; Fortran, Basic; Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 400K bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,716
Maintenance: Return to manufacturing facility; Third-party
Date First Installed: September 1981
Number Installed to Date: 50 — 100

EPIC COMPUTER PRODUCTS, INC.
EPISODE 2248
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 800K bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,916
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: September 1981
Number Installed to Date: 50 — 100

EPIC COMPUTER PRODUCTS, INC.
EPISODE 2296
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 1 8M bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,280
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: September 1981

EPIC COMPUTER PRODUCTS, INC.
EPISODE 3205
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 5 8M bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,692
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: September 1982
Number Installed to Date: 50 — 100

EPIC COMPUTER PRODUCTS, INC.
EPISODE 3210
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 10 8M bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,975
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: September 1982
Number Installed to Date: 50 — 100

EPIC COMPUTER PRODUCTS, INC.
EPISODE 3215
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 15 8M bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,232
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: September 1982
Number Installed to Date: 50 — 100

EPIC COMPUTER PRODUCTS, INC.
EPISODE 3220
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 4
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,480
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: September 1982
Number Installed to Date: 50 — 100

EPSON AMERICA, INC.
HX-20
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 640M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $795
Maintenance: Return to manufacturing facility
Date First Installed: January 1983
(See Vendor Profile Page V-9)

EPSON AMERICA, INC.
QX-10
Desktop
Word Length: 8-bit
Operating System: VALDOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,495 to $2,995
Maintenance: Return to manufacturing facility
Date First Installed: February 1983

EPSON AMERICA, INC.
QX-10 CP/M
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,495
Maintenance: Return to manufacturing facility
Date First Installed: February 1983

ESSEX ENGINEERING CO.
SX-1107
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes 8
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9,000 to $11,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $110
Date First Installed: October 1982
Number Installed to Date: 6
(See Vendor Profile Page V-9)

ESTIMATION, INC.
CONTRACTOR I
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Pascal, Assembly
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $14,000
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $75
Date First Installed: September 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-9)

EUCLID COMPUTER, INC.
EUCLID E1
Micro
Word Length: 16-bit
Operating System: MP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes 16
Maximum On-Line Storage: 150M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,995 to $15,000
Maintenance: Third-party
Date First Installed: 1982
(See Vendor Profile Page V-9)

EXO EYSTEME CORP.
AVALANCHE
Micro
Word Length: 8-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: No
Maximum On-Line Storage: 256K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $595
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: November 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-9)

EXO EYETEME CORP.
AVALANCHE PLUS
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: No
Maximum On-Line Storage: 512K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $795
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: November 1982
Number Installed to Date: 100 — 500

EXO EYSTEMS CORP.
AVALANCHE PLUS 2
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: No
Maximum On-Line Storage: 340M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,795
Maintenance: On-site
Average Maintenance Fee: $40

Date First Installed: November 1982
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 501
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 500K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,495 to $3,985
Maintenance: On-site
Average Maintenance Fee: $25
Date First Installed: May 1980
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 502
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,495 to $3,895
Maintenance: On-site
Average Maintenance Fee: $25
Date First Installed: May 1980
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 503
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,495 to $3,895
Maintenance: On-site
Average Maintenance Fee: $25
Date First Installed: May 1980
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 581
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 6 6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6 495 to $7 495
Maintenance: On-site
Average Maintenance Fee: $30
Date First Installed: February 1982
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 582
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 7.2G bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,495 to $7,495
Maintenance: On-site
Average Maintenance Fee: $30
Date First Installed: February 1982
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 583
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 13M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,495 to $7,495
Maintenance: On-site
Average Maintenance Fee: $30
Date First Installed: February 1981
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 801
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 1 2M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,795 to $10,395
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: May 1980
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 802
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 2 4M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,795 to $10,395
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: May 1980
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 810
Micro
Word Length: 9-bit
Operating System: MP/M, EXO/NET, CP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 325K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 10M bytes
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,795 to $10,395
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: May 1981
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 820
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Purchase Price: $3,795 to $10,395
Date First Installed: May 1981
Number Installed to Date: 100 — 500

EXO SYSTEMS CORP.
SYSTEM 840
Micro
Word Length: 9-bit
Operating System: CP/M, EXO/NET, MP/M
Languages Supported: Basic, Pascal, PL/1, MT Plus, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,795 to $10,395
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: May 1981
Number Installed to Date: 100 — 500

EZ DATA, INC.
EZ-300
Personal
Word Length: 8-bit
Operating System: CMP, UNISYN
Minimum Memory: 192K bytes
Maximum Memory: 320K bytes
Multiple Users: No
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $7,000
Maintenance: Third-party
Date First Installed: January 1983
(See Vendor Profile Page V-9)

EZ DATA, INC.
EZ-GRADUATE
Personal
Word Length: 8-bit
Operating System: CMP, UNISYN
Minimum Memory: 192K bytes
Maximum Memory: 320K bytes
Multiple Users: No
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,450
Maintenance: Third-party
Date First Installed: April 1983

FACIT, INC.
DTC
Micro
Word Length: 8-bit
Operating System: FACIT DOS
Languages Supported: Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,295 to $4,395
Maintenance: Third-party
Average Maintenance Fee: $44
Date First Installed: February 1982
(See Vendor Profile Page V-9)

FLORIDA COMPUTER GRAPHICS
BEACON
Micro
Specific Application: Graphics

Word Length: 8-bit
Operating System: CP/M
Languages Supported: Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 288K bytes
Maximum Memory: 896K bytes
Maximum On-Line Storage: 80K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental
Purchase Price: $16,000 to $30,000
Maintenance: On-site, ITT, Courier
Date First Installed: June 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-9)

FORTUNE SYSTEMS CORP.
32:16
Desktop
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 14
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 14
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $30,000
Maintenance: On-site, Return to manufacturing facility, Third-party
Date First Installed: August 1982
Number Installed to Date: 10,000 — 50,000
(See Vendor Profile Page V-9)

FORWARD TECHNOLOGY, INC.
MODEL 500
Micro
Specific Application: Graphics
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $19,000
Maintenance: Return to manufacturing facility
Date First Installed: April 1982
Number Installed to Date: 200
(See Vendor Profile Page V-9)

FORWARD TECHNOLOGY, INC.
MODEL 3000
Micro
Specific Application: Graphics
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $14,000
Maintenance: Return to manufacturing facility
Date First Installed: December 1982
Number Installed to Date: 10 — 50

FRANCHISE MAILING SYSTEMS
3410
Micro
Specific Application: List Maintenance
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Basic plus 2
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 512M bytes
Communications Protocols: RS-232
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $8,000
Maintenance: On-site, MSI
Date First Installed: 1876
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-10)

FRANCHISE MAILING SYSTEMS
3420
Micro
Specific Application: List Maintenance
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Basic plus 2
Minimum Memory: 64M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 512M bytes
Communications Protocols: RS-232
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $50,000 to $120,000
Maintenance: On-site, MSI Corp.
Date First Installed: 1982
Number Installed to Date: Less than 10

FRANCHISE MAILING SYSTEMS
3440
Micro
Specific Application: Graphic Arts Processing
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Basic plus 2
Minimum Memory: 64K bytes
Maximum Memory: 512M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 512M bytes
Communications Protocols: RS-232
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $100,000
Maintenance: On-site, MSI Corp
Date First Installed: 1980
Number Installed to Date: Less than 10

FRANCHISE MAILING SYSTEMS
PELICAN
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 500K bytes
Maximum I/O Ports: 10
Communications Protocols: RS-232
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $55,000
Maintenance: On-site

FRANCHISE MAILING SYSTEMS
PHOENIX
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum I/O Ports: 10
Communications Protocols: RS-232
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $80,000
Maintenance: On-site

FRANKLIN COMPUTER CORP.
ACE 1000
Desktop
Word Length: 8-bit
Operating System: DOS 3.3
Languages Supported: Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 350K bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,500 to $2,100
Maintenance: Third-party
Date First Installed: March 1982
Number Installed to Date: 7,500
(See Vendor Profile Page V-10)

FRANKLIN COMPUTER CORP.
ACE 1200
Desktop
Word Length: 8-bit
Operating System: DOS 3.3
Languages Supported: Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 350M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,200 to $2,800
Maintenance: Third-party
Date First Installed: February 1983
Number Installed to Date: Less than 10

FRIENDS AMIS, INC.
PORTABRAIN
Micro
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 192K bytes
Multiple Users: No
Maximum On-Line Storage: 256K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $995
Maintenance: Third-party
Date First Installed: October 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-10)

FUJITSU MICROELECTRONICS, INC.
MICRO 16S
Personal
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Maximum On-Line Storage: 1.2M bytes
Communications Protocols: Asynchronous, Synchronous,
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,000
Maintenance: Third-party
(See Vendor Profile Page V-10)

GAVILAN COMPUTER CORP.
GAVILAN
Portable Computer
Specific Application: Document Orientation
Word Length: 8-bit
Operating System: GAVILAN OS, MS-DOS
Languages Supported: Basic, Pascal
Minimum Memory: 80K bytes
Maximum Memory: 500K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Communications Protocols: Asynchronous
Distribution: Third-party, OEM, End user
Vendor Sales Terms: Purchase
Purchase Price: $369,500 to $822,500
Maintenance: On-site
Number Installed to Date: Less than 10
(See Vendor Profile Page V-10)

GENERAL AUTOMATION, INC.
ZEBRA 1000
Micro
Word Length: 16/32-bit
Operating System: XENIX: PICK
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user: Third-party
Purchase Price: $18,950 to $30,000
(See Vendor Profile Page V-10)

Micros

GENERAL AUTOMATION, INC.
ZEBRA 1500
Micro
Word Length: 16/32-bit
Operating System: PICK
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $21,000 to $30,000

GENERAL AUTOMATION, INC.
ZEBRA 2000
Micro
Word Length: 16/32-bit
Operating System: XENIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 70M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: End user, OEM, Third-party
Purchase Price: $23,000 to $30,000

GENERAL AUTOMATION, INC.
ZEBRA 2500
Micro
Word Length: 16/32-bit
Operating System: PICK
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 70M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $26 000 to $34,000

GENERAL AUTOMATION, INC.
ZEBRA 3000
Micro
Word Length: 16/32-bit
Operating System: XENIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 280M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $30,000 to $56,000

GENERAL AUTOMATION, INC.
ZEBRA 3500
Micro
Word Length: 16/32-bit
Operating System: PICK
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 280M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Vendor Sales Terms: Purchase
Purchase Price: $38 000 to $60,000
Maintenance: Remote diagnostics

GENERAL AUTOMATION, INC.
ZEBRA 5500
Micro
Word Length: 16/32-bit
Operating System: PICK
Languages Supported: Basic
Multiple Users: Yes, 32
Maximum On-Line Storage: 632M bytes
Communications Protocols: Asynchronous
Distribution: End user, OEM
Purchase Price: $59,000 to $134 000
Maintenance: On-site

GIMIX, INC.
GIMIX
Desktop
Word Length: 8-bit
Operating System: OS9-I, OS9-GIMIX III, OS9-II
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 56K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 280M bytes
Maximum I/O Ports: 104
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,000 to $17,000
Maintenance: On-site
Date First Installed: 1980
(See Vendor Profile Page V-10)

GMR, INC.
SM-1
Micro
Word Length: 8-bit
Operating System: CP/M, CDOF
Languages Supported: RPG, APL, C, Cobol, Fortran, Basic, Basic plus, Basic plus 2, Pascal, PL/1, Bliss, Coral
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes
Communications Protocols: HDLC; Asynchronous, Synchronous, X 25, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user; OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,250
Maintenance: Remote diagnostics, Return to manufacturing facility
Date First Installed: 1977
Number Installed to Date: 2,000
(See Vendor Profile Page V-10)

GOLDEN WEST COMPUTERS
999 SERIES
Micro
Specific Application: Word Processing, Accounting
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Basic, Basic plus, Pascal, CP80
Minimum Memory: 64K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 866M bytes
Maximum I/O Ports: 48
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,500 to $35,000
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $30
Date First Installed: December 1979
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-10)

GOULD, INC.
FACTORY CONTROLLER
Micro
Word Length: 8-bit
Minimum Memory: 1M bytes
Maximum Memory: 4M bytes
Multiple Users: No
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 500
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $100,000 to $250,000
Maintenance: On-site
Date First Installed: 1981
Number Installed to Date: 5
(See Vendor Profile Page V-10)

GRIFFIN TECHNOLOGY, INC.
ANALYST
Micro
Specific Application: Food Service
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 250K bytes
Maximum Memory: 250K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Purchase Price: $34,000
Maintenance: On-site
Date First Installed: 1982
Number Installed to Date: 3
(See Vendor Profile Page V-10)

GRIFFIN TECHNOLOGY, INC.
VALDINE
Micro
Specific Application: Food Service
Word Length: 8-bit
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 4
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase; Rental
Purchase Price: $20,000 to $120 000
Maintenance: On-site
Date First Installed: 1977
Number Installed to Date: 100

GRIFFIN TECHNOLOGY, INC.
VALDINE SERIES/33
Micro
Specific Application: Food Service
Word Length: 8-bit
Minimum Memory: 8K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Purchase Price: $4,000 to $18,000
Maintenance: On-site
Date First Installed: 1973
Number Installed to Date: 200

HARDY COMPUTER CORP.
801
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 50M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,350 to $5,000
Maintenance: Third-party
Date First Installed: June 1980
Number Installed to Date: 400
(See Vendor Profile Page V-10)

HARDY COMPUTER CORP.
8001
Desktop
Word Length: 16-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1; C
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 50M bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,000 to $7,000
Maintenance: Third-party
Date First Installed: July 1981
Number Installed to Date: 125

HARTRONIX, INC.
4532A
Micro
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: Assembler; Forth, Basic
Minimum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 320M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,000 to $20,000
Maintenance: On-site
(See Vendor Profile Page V-10)

HEATH CO.
Z100 LOW PROFILE
Micro
Word Length: 8/16-bit
Operating System: CP/M 86, MS-DOS, ZDOS
Languages Supported: MS-Basic, Fortran, Cobol
Minimum Memory: 128K bytes
Maximum Memory: 192K bytes
Multiple Users: No

Zilog's new System 8000 speaks seven languages. Fluently!

Zilog

Maximum On-Line Storage: 10M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4 000 to $4,320
Maintenance: Return to manufacturing facility
Date First Installed: February 1983
(See Vendor Profile Page V-10)

HEATH CO.
Z100 SERIES
Micro
Word Length: 8/16
Operating System: CP/M 86, ZDOS, MS-DOS
Languages Supported: Cobol, Fortran, MS-Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 192K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,099 to $4,599
Maintenance: Return to manufacturing facility
Date First Installed: February 1983

HEURIKON CORP.
HK68000 SYSTEM
Micro
Word Length: 16-bit
Operating System: UNIX, CP/M
Languages Supported: Cobol, Fortran, Basic Basic plus, Pascal, C
Multiple Users: Yes
Maximum On-Line Storage: 320M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,590 to $3,740
Maintenance: Return to manufacturing facility
Date First Installed: November 1982
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-11)

HEWLETT-PACKARD CO.
9835
Desktop
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 480M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user; OEM
Vendor Sales Terms: Purchase; Lease
Purchase Price: $13,000
Maintenance: On-site
Date First Installed: 1979
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-11)

HEWLETT-PACKARD CO.
9845
Desktop
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: Basic
Minimum Memory: 56K bytes
Maximum Memory: 449K bytes
Multiple Users: No
Maximum On-Line Storage: 120M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $26 000
Maintenance: On-site
Date First Installed: 1979

HEWLETT-PACKARD CO.
HP 83A
Personal
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: Basic
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 26M bytes
Communications Protocols: Asynchronous
Distribution: End user; Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,400
Maintenance: On-site; Return to manufacturing facility
Date First Installed: 1981

HEWLETT-PACKARD CO.
HP 85A
Desktop
Word Length: 6-bit
Operating System: Proprietary
Languages Supported: Basic
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 5M bytes
Communications Protocols: Asynchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,500
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1980

HEWLETT-PACKARD CO.
HP 86
Desktop
Word Length: 8-bit
Operating System: HP-DOS, CP/M
Languages Supported: Basic, AGL
Minimum Memory: 64K bytes
Maximum Memory: 576K bytes
Multiple Users: No
Maximum On-Line Storage: 5M bytes
Communications Protocols: Asynchronous
Distribution: End user; Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,800
Maintenance: On-site
Average Maintenance Fee: $20
Date First Installed: July 1982

HEWLETT-PACKARD CO.
HP 87
Desktop
Word Length: 8-bit
Operating System: HP-DOS, CP/M
Languages Supported: Basic, AGL
Minimum Memory: 128K bytes
Maximum Memory: 640K bytes
Multiple Users: No
Maximum On-Line Storage: 5M bytes
Communications Protocols: Asynchronous
Distribution: End user; Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,800
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $20
Date First Installed: March 1982

HEWLETT-PACKARD CO.
HP 9826
Desktop
Word Length: 16-bit
Operating System: HP-1B
Languages Supported: Basic, Pascal, HPL
Multiple Users: Yes
Maximum Memory: 512K bytes
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Purchase Price: $9 000 to $12,000
Maintenance: On-site
Date First Installed: 1981
Number Installed to Date: 1,000 — 10,000

HEWLETT-PACKARD CO.
HP SERIES 200
Personal
Word Length: 16-bit
Languages Supported: Basic, Pascal, HPL, Forth
Minimum Memory: 64K bytes
Maximum Memory: 4.6M bytes
Multiple Users: No
Maximum On-Line Storage: 9 6M bytes
Communications Protocols: Asynchronous
Distribution: End user; Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,000 to $16,000
Maintenance: On-site
Average Maintenance Fee: $30
Date First Installed: 1981

HITACHI AMERICA, LTD.
MBE 16000 SERIES
Personal
Word Length: 16-bit
Operating System: MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 384K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Vendor Sales Terms: Purchase
Maintenance: On-site
(See Vendor Profile Page V-11)

HOUSTON ENGINEERING RESEARCH CORP.
HOUSTON ENGINEERING
Micro
Word Length: 8/16-bit
Operating System: Proprietary
Languages Supported: Fortran, Assembler
Minimum Memory: 64K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site; Return to manufacturing facility; Third-party
(See Vendor Profile Page V-11)

IBM
5150
(PERSONAL COMPUTER)
Personal
Word Length: 8-bit
Operating System: DOS 1.1; CP/M 86, DOS 2
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 544K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,500
Maintenance: On-site
Date First Installed: October 1981
Number Installed to Date: 230,000
(See Vendor Profile Page V-11)

IBM
5150
(XT)
Personal
Word Length: 8-bit
Operating System: DOS 1.1, CP/M 86, DOS 2
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 640K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: Third-party
Purchase Price: $5,000

IBM
SYSTEM/23 DATAMASTER
Desktop
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 35.2G bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $10,000
Maintenance: On-site
Date First Installed: July 1981
Number Installed to Date: 25,000

IDEOGRAPHIX, INC.
IDEOGRAPHIX 5486
Word Processing System
Specific Application: Chinese Language Processing
Word Length: 16-bit
Operating System: RNX
Languages Supported: Cobol, Fortran, PL/1
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $20,000
Date First Installed: April 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-11)

IBS INTERNATIONAL
5000IS (INTEL)
Micro
Word Length: 16-bit

Operating System: CP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1.2M bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,200 to $7,200
Maintenance: Western Union
Date First Installed: February 1983
Number Installed to Date: 40
(See Vendor Profile Page V-11)

IMS INTERNATIONAL
5000IS (ZILOG)
Desktop
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,600 to $6,600
Maintenance: Western Union
Date First Installed: July 1982
Number Installed to Date: 200

IMS INTERNATIONAL
5000SX (INTEL)
Micro
Word Length: 16-bit
Operating System: CP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,600 to $7,600
Maintenance: Western Union
Date First Installed: November 1981
Number Installed to Date: 100

IMS INTERNATIONAL
5000SX (ZILOG)
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Maximum Memory: 576K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,600 to $7,000
Maintenance: Western Union
Date First Installed: November 1981
Number Installed to Date: 3,000

IMS INTERNATIONAL
8000S (INTEL)
Micro
Word Length: 16-bit
Operating System: CP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,600 to $25,600
Maintenance: Western Union
Date First Installed: February 1983

IMS INTERNATIONAL
8000S (ZILOG)
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $25,000
Maintenance: Western Union
Date First Installed: 1980
Number Installed to Date: 1,500

IMS INTERNATIONAL
8000SX (ZILOG)
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 576K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,900 to $11,000
Maintenance: Western Union
Date First Installed: November 1981
Number Installed to Date: 4,500

INDEP, INC.
APOGEE I
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 3
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $8,500 to $10,500
Maintenance: On-site
Average Maintenance Fee: $78
Date First Installed: February 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-11)

INNOTRONICS CORP.
SERIES 6000
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Maximum On-Line Storage: 105M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $11,000 to $26,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $26
Date First Installed: March 1977
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-11)

INSTRUMENTATION LABORATORY, INC.
PIXEL 100/AP
Supermicro
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, C, Ada
Minimum Memory: 512K bytes
Maximum Memory: 6M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $12,825 to $30,000
Maintenance: On-site
Average Maintenance Fee: $280
Date First Installed: June 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-12)

INTEGRATED BUSINESS COMPUTERS, INC.
CADET
Micro
Word Length: 8-bit
Operating System: OASIS, MP/M, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 120M bytes
Maximum I/O Ports: 11
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $12,000
Maintenance: Third-party
Average Maintenance Fee: $180
Date First Installed: 1980
Number Installed to Date: 2,000
(See Vendor Profile Page V-12)

INTEGRATED BUSINESS COMPUTERS, INC.
ENSIGN
Micro
Word Length: 16-bit
Operating System: UNIX, OASIS-16
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 512K bytes
Maximum Memory: 8M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 1.2G bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25,000
Maintenance: Third-party
Average Maintenance Fee: $375
Date First Installed: April 1983

INTEGRATED BUSINESS COMPUTERS, INC.
MIDI-CADET
Micro
Word Length: 8-bit
Operating System: OASIS, MP/M, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 240M bytes
Maximum I/O Ports: 11
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,495
Maintenance: Third-party
Average Maintenance Fee: $100
Date First Installed: February 1983

INTEL CORP.
IDIS 86/330
Micro
Word Length: 16-bit
Operating System: RMX-86, XENIX
Languages Supported: Fortran, Pascal, PL/M, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 640K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 35M bytes
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site
(See Vendor Profile Page V-12)

INTEL CORP.
IDIS 86/735
Micro
Word Length: 16-bit
Operating System: XENIX
Languages Supported: Cobol, Fortran, Basic, C
Minimum Memory: 768K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 35M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $34,995
Maintenance: Return to manufacturing facility

INTELLIGENT SYSTEMS CORP.
INTECOLOR 3650
Desktop
Word Length: 8-bit
Operating System: FCS
Languages Supported: Disc, Basic
Minimum Memory: 24K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 460K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,900 to $5,000
Maintenance: On-site
Average Maintenance Fee: $30
Date First Installed: March 1979
(See Vendor Profile Page V-12)

INTELLIGENT SYSTEMS CORP.
INTECOLOR 8050
Desktop
Word Length: 8-bit
Operating System: FCS
Languages Supported: Disc, Basic
Minimum Memory: 30K bytes
Maximum Memory: 56K bytes
Multiple Users: No
Maximum On-Line Storage: 4.6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,800 to $6,500
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: January 1977

INTELLIGENT SYSTEMS CORP.
INTECOLOR 8060
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: M-Basic
Minimum Memory: 30K bytes
Maximum Memory: 56K bytes
Multiple Users: No
Maximum On-Line Storage: 4.6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $7,000
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: June 1978

INTELLIGENT SYSTEMS CORP.
INTECOLOR 8350
Desktop
Word Length: 8-bit
Operating System: FCS
Languages Supported: EXT; Disc, Basic
Minimum Memory: 30K bytes
Maximum Memory: 56K bytes
Multiple Users: No
Maximum On-Line Storage: 4.6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $7,800
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: April 1977

INTELLIGENT SYSTEMS CORP.
INTECOLOR 8360
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: EXT, Disc, Basic
Minimum Memory: 56K bytes
Maximum Memory: 88K bytes
Multiple Users: No
Maximum On-Line Storage: 4.6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $8,300
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: November 1978

INTELLIMAC, INC.
IN/7000K SERIES
Supermicro
Word Length: 32-bit
Operating System: UNIX, ROS
Languages Supported: Cobol, Fortran, Pascal, C, Ada
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 9
Communications Protocols: X.25, Ethernet
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $22,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: February 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-12)

INTELLIMAC, INC.
IN/7000M
Supermicro
Word Length: 32-bit
Operating System: UNIX 7, ROS
Languages Supported: Cobol, Fortran, Pascal, C, Ada, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 1G bytes
Maximum I/O Ports: 21
Communications Protocols: X.25, Ethernet
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $47,500
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: February 1982
Number Installed to Date: 10 — 50

INTER-CARE SYSTEMS, INC.
7200
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 2
Communications Protocols: Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $8,000 to $11,000
Maintenance: Sorbus, Inc
Date First Installed: November 1982
Number Installed to Date: 100
(See Vendor Profile Page V-12)

INTER-CARE SYSTEMS, INC.
7300
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol; Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 2
Communications Protocols: Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $10,000 to $13,000
Maintenance: Sorbus, Inc
Date First Installed: November 1982
Number Installed to Date: 100

INTER-CARE SYSTEMS, INC.
7400
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 2
Communications Protocols: Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $14,000 to $16,000
Maintenance: Sorbus, Inc.
Date First Installed: November 1982
Number Installed to Date: 100

INTER-CARE SYSTEMS, INC.
7500
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 2
Communications Protocols: Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $19,000 to $24,000
Maintenance: Sorbus, Inc.
Date First Installed: December 1982
Number Installed to Date: 100

INTER-CARE SYSTEMS, INC.
8200
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 13
Communications Protocols: Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $11,500 to $15,000
Maintenance: Sorbus, Inc
Date First Installed: November 1982
Number Installed to Date: 100

INTER-CARE SYSTEMS, INC.
8300
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 13
Communications Protocols: Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $15,500 to $22,000
Maintenance: Sorbus, Inc
Date First Installed: November 1982
Number Installed to Date: 100

INTER-CARE SYSTEMS, INC.
8400
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 13
Communications Protocols: Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $14,500 to $20,000
Maintenance: On-site, Sorbus, Inc.
Date First Installed: November 1982
Number Installed to Date: 100

INTER-CARE SYSTEMS, INC.
8500
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: No
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 13
Communications Protocols: Bisynchronous
Distribution: Third-party

Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $19,000 to $30,000
Maintenance: Sorbus, Inc
Date First Installed: December 1982
Number Installed to Date: 100

INTER CITY PAPERS, LTD.
PC-1
Micro
Word Length: 8-bit
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,500
Maintenance: On-site
Date First Installed: 1976
Number Installed to Date: 150
(See Vendor Profile Page V-12)

INTERNATIONAL ENTRY SYSTEMS, INC.
6000
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,400 to $3,995
Maintenance: On-site
Average Maintenance Fee: $30
Date First Installed: September 1982
Number Installed to Date: 20
(See Vendor Profile Page V-12)

INTERNATIONAL ENTRY SYSTEMS, INC.
DATA CORDER 1
Desktop
Word Length: 8-bit
Languages Supported: Quick
Minimum Memory: 16K bytes
Maximum Memory: 16K bytes
Multiple Users: No
Maximum I/O Ports: 1
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $2,200
Maintenance: On-site
Average Maintenance Fee: $25
Date First Installed: June 1979
Number Installed to Date: 500

INTERNATIONAL TELECONTROL CORP.
SERIES 850
Micro
Specific Application: Training
Word Length: 8-bit
Minimum Memory: 24K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $28,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $150
Date First Installed: January 1983
(See Vendor Profile Page V-12)

INTERSIL SYSTEMS, INC.
INFORMATION PROCESSOR
Personal
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 3
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,500
Maintenance: General Electric Co.
Average Maintenance Fee: $47
Date First Installed: June 1982
(See Vendor Profile Page V-12)

INTERSIL SYSTEMS, INC.
ISB 80/85
Micro
Specific Application: Process Control
Word Length: 8-bit
Operating System: CP/M 2.2; CP/M 3.0
Languages Supported: Fortran, Basic, Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Communications Protocols: SDLC; HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,500 to $7,500
Maintenance: On-site; Return to manufacturing facility
Date First Installed: September 1982
Number Installed to Date: 10 - 50

INTERTEC DAYA SYSTEMS CORP.
COMPUSTAR
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 350K bytes
Maximum Memory: 1.5M bytes
Multiple Users: No
Maximum On-Line Storage: 144M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,000
Maintenance: Third-party
Date First Installed: January 1981
Number Installed to Date: 10,000 - 50,000
(See Vendor Profile Page V-12)

INTERTEC DAYA SYSTEMS CORP.
SUPERBRAIN
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: No
Maximum On-Line Storage: 12M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $15,000
Maintenance: Third-party
Date First Installed: October 1979
Number Installed to Date: 10,000 - 50,000

ITHACA INTERSYSTEMS, INC.
ENCORE MPU8000
Desktop
Word Length: 16-bit
Operating System: XENIX
Languages Supported: Cobol; Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
(See Vendor Profile Page V-12)

ITHACA INTERSYSTEMS, INC.
ENCORE XPU80
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol; Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase

ITHACA INTERSYSTEMS, INC.
ITHACA 525/800
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M, UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, APL, PL/1, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum I/O Ports: 12
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,000
Maintenance: Third-party
Date First Installed: January 1982
Number Installed to Date: 500 - 1,000

ITHACO, INC.
COMPUDAS
Micro
Specific Application: Data Acquisition
Word Length: 8-bit
Operating System: DABL
Languages Supported: Basic
Minimum Memory: 20K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 5
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $7,000 to $30,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $160
Date First Installed: 1977
Number Installed to Date: 350
(See Vendor Profile Page V-12)

JONOS LTD.
JONAS 2100
Portable
Word Length: 8-bit
Operating System: CP/M 2.2, CP/M 3.0
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 966K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,995 to $4,690
Maintenance: Western Union
Date First Installed: June 1982
Number Installed to Date: 100 - 500
(See Vendor Profile Page V-12)

JONOS LTD.
JONAS 2500
Portable
Word Length: 8-bit
Operating System: CP/M 2.2, CP/M 3.0
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,995
Maintenance: Western Union

KONTRON ELECTRONICS
2300
Micro
Word Length: 8-bit
Operating System: KOOS
Languages Supported: Pascal, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 35M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $17,000 to $40,000
Maintenance: On-site
Average Maintenance Fee: $250
Date First Installed: November 1978
Number Installed to Date: 4,500
(See Vendor Profile Page V-12)

KONTRON ELECTRONICS
KDS
Micro
Word Length: 16-bit

Operating System: UNIX
Languages Supported: Pascal, Assembler
Minimum Memory: 1M bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, RS-232
Distribution: End user
Vendor Sales Terms: Purchase Lease
Purchase Price: $22,000 to $50,000
Maintenance: On-site
Average Maintenance Fee: $300
Date First Installed: February 1983
Number Installed to Date: 10 - 50

LABORATORY TECHNOLOGIES CORP.
LAB TECH 70
Micro
Specific Application: Laboratory Use
Word Length: 16-bit
Operating System: IRMX-86, CP/M 86, MS-DOS
Languages Supported: Fortran Pascal, PLM/86, Microsoft Basic
Minimum Memory: 380K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $19,000
Maintenance: On-site
Average Maintenance Fee: $160
Date First Installed: April 1982
Number Installed to Date: 16
(See Vendor Profile Page V-12)

LANIER BUSINESS PRODUCTS, INC.
COMPUTER EZE
Desktop
Word Length: 8-bit
Operating System: LEXS, CP/M
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,500 to $9,500
Maintenance: On-site
Average Maintenance Fee: $100
Date First Installed: July 1981
Number Installed to Date: 100 - 500
(See Vendor Profile Page V-12)

LEXOR CORP.
LEXORITER SERIES 3
Word Processing system
Specific Application: Word Processing
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $219,500
Maintenance: Third-party
Date First Installed: November 1982
(See Vendor Profile Page V-12)

LNW RESEARCH CORP.
LNW80
Micro
Word Length: 8-bit
Operating System: DOS+, NEWDOS 80, TRS DOS
Languages Supported: Basic
Minimum Memory: 48K bytes
Maximum Memory: 48K bytes
Multiple Users: No
Maximum On-Line Storage: 1.1M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,695 to $2,695
Maintenance: On-site
(See Vendor Profile Page V-13)

LNW RESEARCH CORP.
LNW80 II
Personal
Word Length: 8-bit
Operating System: CP/M, COOS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 96K bytes
Maximum Memory: 96K bytes
Multiple Users: No
Maximum On-Line Storage: 1.1M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $2,995
Maintenance: On-site

LOGICAL BUSINESS MACHINES
ADAM
Micro
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: English
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 12
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $22,000
Maintenance: Third-party
Date First Installed: September 1982
Number Installed to Date: 1,500
(See Vendor Profile Page V-13)

LOGICAL BUSINESS MACHINES
DAVID
Micro
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: English
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,500
Maintenance: Third-party
Date First Installed: December 1980

LOGICAL BUSINESS MACHINES
GOLIATH
Micro
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: English
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $19,170
Maintenance: Third-party
Date First Installed: October 1980

MAD COMPUTER, INC.
MAD-1
Micro
Word Length: 16-bit
Operating System: MS-DOS 2.0; CP/M 86, Concurrent CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 110M bytes
Communications Protocols: SDLC, Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase; Lease
Purchase Price: $4,225 to $5,925
Date First Installed: July 1983
(See Vendor Profile Page V-13)

MANAGEMENT ASSISTANCE, INC.
S/10
Micro
Word Length: Dual 8-bit
Operating System: BB/M, CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 1.3M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,000 to $8,000
Maintenance: On-site
(See Vendor Profile Page V-13)

MANAGEMENT ASSISTANCE, INC.
S80 SERIES
Micro
Word Length: 8-bit
Operating System: BOSS
Languages Supported: Basic
Minimum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 32M bytes
Maximum I/O Ports: 2
Communications Protocols: Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $14,000 to $46,000
Maintenance: On-site

MANAGEMENT ASSISTANCE, INC.
SYSTEM 110/210
Micro
Word Length: 8-bit
Operating System: BOSS
Languages Supported: Basic
Minimum Memory: 16K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 56M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $20,000 to $62,000
Maintenance: On-site

MANAGEMENT ASSISTANCE, INC.
SYSTEM 310
Micro
Word Length: 8-bit
Operating System: BOSS
Languages Supported: Basic
Minimum Memory: 48K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 120M bytes
Communications Protocols: Asynchronous, Bisynhronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $52,000 to $81,000
Maintenance: On-site

MANAGEMENT ASSISTANCE, INC.
SYSTEM 510
Micro
Word Length: 8-bit
Operating System: BOSS
Languages Supported: Basic
Minimum Memory: 16K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 300M bytes
Communications Protocols: Asynchronous, Bisynhronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $50,000 to $80,000
Maintenance: On-site

MANAGEMENT ASSISTANCE, INC.
SYSTEM 710
Micro
Word Length: 8-bit
Operating System: BOSS
Languages Supported: Basic
Minimum Memory: 48K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 600M bytes
Communications Protocols: Asynchronous, Bisynhronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $68,000 to $112,000
Maintenance: On-site

MANAGEMSNT ASSISTANCE, INC.
SYSTEM 810
Micro
Word Length: 8-bit
Operating System: BOSS/VS
Minimum Memory: 1M bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 40
Maximum On-Line Storage: 144M bytes
Communications Protocolx. Asynchronous Bisynchronous
Distribution: End user
Vendor Salex Terms. Purchase
Purchase Price: $125.000 to $256.000
Maintenance: On-site

MARTEC INTERNATIONAL
IBEX 7500
Micro
Word Length: 8-bit
Operating System: CP/M, DPC/OS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 60M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchrônous
Distribution: OEM
Vendor Sales Terms. Purchase
Purchase Price: $6.000 to $25.000
Maintenance: Ames Technical Service
Date First Installed: 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-13)

MARTEC INTERNATIONAL
IBEX 9000
Micro
Word Length: 8/16-bit
Operating System: MS-DOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2.500 to $15,000
Maintenance: Third-party

MEASURSMSNT SYSTEMS & CONTROLS, INC.
SYSTEM 2900
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M, R-OASIS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 512K bytès
Multiple Users: Yes, 20
Maximum On-Line Storage: 168M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7 000 to $18,000
Maintenance. Third-party
Date First Installed: January 1981
Number Installed to Date: 1 000
(See Vendor Profile Page V-13)

MEGADATA CORP.
8188
Desktop
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Basic, Pascal, Assembler
Mmmum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Communcatbnx Protocols: Asynchronous, Bisynchronous SDLC
Vendor Sales Terms: Purchase
(See Vendor Profile Page V-13)

MEGAOATA CORP.
SERIES 8000
Micro
Specific Application: General Purpose
Word Length: 16/32-bit
Operating System: UNIX, Proprietary
Languages Supported: Cobol, Fortran, Basic, Basic plus, APL, C
Mmmum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 32
Communicatibnx Protocols: Any
Distribution. End user, OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2 000 to $25.000
Maintenance: On-site, Third-party
Date First Installed: 1981
Number Installed to Date: 500 — 1,000

MEPCOM INTERNATIONAL, INC.
TIGER 8
Supermicro
Specific Application: POS
Word Length. 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes
Maximum On-Line Storage: 8 1G bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4 200 to $10.000
Maintenance: Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: June 1981
(See Vendor Profile Page V-13)

MICROCOMPUTER TECHNOLOGY, INC.
MOD III PLUS
Desktop
Word Length: 8-bit
Operating System: TRS-DOS, DOS 50, DOS PLUS, CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 48K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Remote diagnostics
Date First Installed. January 1979
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-13)

MICROPROCESSOR SYSTEMS, INC.
RUBICON
Micro
Word Length: 16-bit
Operating System: CP/M 86
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 46M bytes
Maximum I/O Ports: 16
Communications Protocols Asynchronous
Distribution. OEM, Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: July 1982
Number Installed to Date: 250
(See Vendor Profile Page V-13)

MICRO SOURCE, INC.
M6000P
Micro
Operating System: CP/M, UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3 900
Maintenance: Return to manufacturing facility, Third-party
Date First Installed. June 1981
(See Vendor Profile Page V-13)

MICRO SOURCE, INC.
M6000P-H
Micro
Operating System: CP/M, UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $6 395
Maintenance. Return to manufacturing facility, Third-party
Date First Installed: August 1982

MICRO SOURCE, INC.
M6000P-H/C
Micro
Operating System: CP/M, UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $7.395
Maintenance: Return to manufacturing facility, Third-party
Date First Installed. November 1982

MICRO SOURCE, INC.
M6000P-P/HC
Micro
Operating System: CP/M, UNIX
Languages Supported: Cobol, Fortran, Basic, Basic plus, Pascal, RPG, PL/1, C
Multiple Users: Yes
Maximum On-Line Storage. 10M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: November 1982

MICRO TECHNOLOGY UNLIMITED
MTU-130
Micro
Word Length: 8-bit
Operating System: COOOS, CP/M
Languages Supported: Basic, Pascal, C, Forth
Minimum Memory: 80K bytes
Maximum Memory: 1.3M bytes
Multiple Users: No
Maximum On-Line Storage: 4M bytes
Maximum I/O Ports: 8
Communications Protocols. Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3.350
Maintenance: Return to manufacturing facility
Date First Installed: September 1981
(See Vendor Profile Page V-13)

MICRO TECHNOLOGY UNLIMITED
MTU-1310
Micro
Word Length: 8-bit
Operating System:CODOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 80K bytes
Maximum Memory: 1.3M bytes
Multiple Users: No
Maximum On-Line Storage: 4M bytes
Maximum I/O Ports: 8
Communications Protocols:

Asynchronous, Synchronous.
Distribution: End user
Purchase Price: $5,000
Maintenance: Return to manufacturing facility
Date First Installed: September 1981

MICRO TECHNOLOGY UNLIMITED
MTU-132
Micro
Word Length: 8-bit
Operating System: CODOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Forth
Minimum Memory: 80K bytes
Maximum Memory: 1.3M bytes
Multiple Users: No
Maximum On-Line Storage: 4M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,350 to $6,000
Maintenance: Return to manufacturing facility
Date First Installed: September 1981

MICRO V CORP.
SERIES 1000
Desktop
Word Length: 16-bit
Operating System: STARDOS, BASIC 4, CP/M, MS-DOS
Languages Supported: Cobol, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 14M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: On-site, Return to manufacturing facility, Dealers
Date First Installed: November 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-13)

MICRO V CORP.
SERIES 3000
Desktop
Word Length: 16-bit
Operating System: STARDOS, BASIC 4, CP/M, MS-DOS
Languages Supported: Cobol, Basic
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 11
Maximum On-Line Storage: 70M bytes
Maximum I/O Ports: 11
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $24,000
Maintenance: Dealers
Date First Installed: September 1981
Number Installed to Date: 1,000 — 5,000

MIKROS SYSTEMS CORP.
MKS 16/0
Micro
Word Length: 16-bit
Languages Supported: Pascal, MIL-STD-1750A
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $26,550 to $30,000
Maintenance: On-site
Date First Installed: August 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-13)

MIKROS SYSTEMS CORP.
MKS 1750/D
Micro
Word Length: 16-bit
Languages Supported: MIL-STD-1750A
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $32,000 to $38,400
Maintenance: On-site
Date First Installed: January 1983
Number Installed to Date: 10 — 50

MITSUBISHI ELECTRONICS AMERICA, INC.
MITSUBISHI 818 DISTRIBUTED RESOURCE SYSTEM
Desktop
Word Length: 16-bit
Operating System: MP/M 86
Languages Supported: Cobol, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 100M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Bisynchronous SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,000 to $50,000
Maintenance: On-site, Remote diagnostics, Third-party
Date First Installed: April 1983
Number Installed to Date: Less than 10
(See Vendor Profile Page V-14)

MOHAWK DATA SCIENCES CORP.
SERIES 21 21/10
Desktop
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Cobol, Mobol
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 15M bytes
Communications Protocols: SDLC, Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,035
Maintenance: On-site, Remote diagnostics
Date First Installed: April 1981
(See Vendor Profile Page V-14)

MOHAWK DATA SCIENCES CORP.
SERIES 21 21/20
Word Processing system
Word Length: 8-bit
Languages Supported: Cobol, Mobol
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 9
Maximum On-Line Storage: 156M bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,900
Maintenance: On-site, Remote diagnostics
Date First Installed: 1977

MOHAWK DATA SCIENCES CORP.
SERIES 21 21/40
Word Processing system
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Cobol, Mobol
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 9
Maximum On-Line Storage: 156M bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,900
Maintenance: On-site, Remote diagnostics
Date First Installed: 1978

MOHAWK DATA SCIENCES CORP.
SERIES 21 21/50
Word Processing system
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Cobol, Mobol
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum On-Line Storage: 156M bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC, SDLC/SNA, X.25
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $10,000
Maintenance: On-site, Remote diagnostics
Date First Installed: 1978

MOHAWK DATA SCIENCES CORP.
SERIES 21 21/60
Word Processing system
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Cobol, Mobol
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 156M bytes
Communications Protocols: SDLC, Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Remote diagnostics
Date First Installed: July 1983

MOHAWK DATA SCIENCES CORP.
SERIES 21 21/70
Word Processing system
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Cobol, Mobol
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 156M bytes
Communications Protocols: Asynchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Remote diagnostics
Date First Installed: September 1983

MOLECULAR COMPUTER
SUPERMICRO 8
Micro
Word Length: 8-bit
Operating System: N/STAR, CP/M, CP/M 86
Languages Supported: Cobol, Basic, PL/1, MAC/RMAC, CB80
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 45M bytes
Maximum I/O Ports: 19
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,700 to $30,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $260
Date First Installed: September 1981
(See Vendor Profile Page V-14)

MOLECULAR COMPUTER
SUPERMICRO 32
Micro
Word Length: 8-bit
Operating System: N/STAR, CP/M, CP/M 86
Languages Supported: Cobol, Basic, PL/1, MAC/RMAC, CB80
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 120M bytes
Maximum I/O Ports: 67
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $16,700 to $100,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $260
Date First Installed: 1981

MOLECULAR COMPUTER
SUPERMICRO 32X
Micro
Word Length: 8-bit
Operating System: N/STAR, CP/M, CP/M 86
Languages Supported: Cobol, Basic, PL/1, MAC/RMAC, C86
Minimum Memory: 64K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 240M bytes
Maximum I/O Ports: 67
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $21,000 to $118,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $260
Date First Installed: June 1983

MOLECULAR COMPUTER
SUPERMICRO 64X
Micro
Word Length: 8-bit
Operating System: N/STAR, CP/M, CP/M 86
Languages Supported: Cobol, Basic, PL/1, MAC/RMAC, C860
Minimum Memory: 64K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 272M bytes
Maximum I/O Ports: 131
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $25,000 to $175,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $260
Date First Installed: September 1983

MOMENTUM COMPUTER SYSTEMS INTERNATIONAL
HAWK 32
Supermicro
Word Length: 16/32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 400M bytes
Maximum I/O Ports: 16
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $11,000 to $20,000
Maintenance: Third-party
Date First Installed: March 1982
(See Vendor Profile Page V-14)

MOMENTUM COMPUTER SYSTEMS INTERNATIONAL
HAWK 32/E
Supermicro
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum I/O Ports: 16
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $14,000 to $25,000
Maintenance: Third-party
Date First Installed: December 1982

MOMENTUM COMPUTER SYSTEMS INTERNATIONAL
HAWK 32/4
Supermicro
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum I/O Ports: 4
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $12,000
Maintenance: Bunker Ramo
Date First Installed: December 1982

MOMENTUM COMPUTER SYSTEMS INTERNATIONAL
MOMENTUM 32
Supermicro
Word Length: 16/32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 500K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 240M bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $25,000
Maintenance: Bunker Ramo
Date First Installed: February 1982
Number Installed to Date: 220

MOMENTUM COMPUTER SYSTEMS INTERNATIONAL
MOMENTUM 32/4
Supermicro
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 500K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 90M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $14,000
Maintenance: Bunker Ramo
Date First Installed: December 1982
Number Installed to Date: 28

MOMENTUM COMPUTER SYSTEMS INTERNATIONAL
MOMENTUM 32E
Supermicro
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 500K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 240M bytes
Maximum I/O Ports: 17
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $13,500 to $25,000
Maintenance: Bunker Ramo
Date First Installed: January 1983
Number Installed to Date: 32

MONOLITHIC SYSTEMS CORP.
MSC-8702
Micro
Word Length: 16-bit
Operating System: DEC, RSTS/E, RSX-11, UNIX
Languages Supported: Fortran, Basic, Basic plus 2, Pascal
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 12.2M bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user, OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,800
Maintenance: Return to manufacturing facility
Date First Installed: November 1981
(See Vendor Profile Page V-14)

MONOLITHIC SYSTEMS CORP.
MSC-8800 SERIES
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 15
Maximum On-Line Storage: 4M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $18,000
Maintenance: Return to manufacturing facility
Date First Installed: 1979
Number Installed to Date: 100 — 500

MONOLITHIC SYSTEMS CORP.
MSC-8801
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Fortran, Basic, Basic plus, Pascal
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,250
Maintenance: Return to manufacturing facility
Date First Installed: June 1981

MONOLITHIC SYSTEMS CORP.
MSC-8802
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Fortran, Basic, Basic plus, Pascal
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 13.2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,000
Maintenance: Return to manufacturing facility
Date First Installed: June 1981

MONOLITHIC SYSTEMS CORP.
MSC-8805
Micro
Word Length: 8-bit
Operating System: MP/M
Languages Supported: Basic
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 13.2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,000
Maintenance: Return to manufacturing facility
Date First Installed: June 1981

MOSTEK CORP.
MATRIX-80/SDT
Micro
Specific Application: General Purpose
Word Length: 8-bit
Operating System: FLP-DOS
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 500K bytes
Maximum I/O Ports: 1
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,300
Maintenance: Return to manufacturing facility
Date First Installed: 1980
(See Vendor Profile Page V-14)

MOSTEK CORP.
MATRIX/200
Micro
Word Length: 8-bit
Operating System: M/OS-80
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 1
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,995
Maintenance: Return to manufacturing facility
Date First Installed: January 1982
(See Vendor Profile Page V-14)

MULLEN COMPUTER PRODUCTS
STD 991
Micro
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Basic, Assembler
Minimum Memory: 64K bytes

Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 430K bytes
Maximum I/O Ports: 256
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,695 to $4,195
Maintenance: On-site
(See Vendor Profile Page V-14)

MULTI-TECH SYSTEMS, INC.
MT 500
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 11M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,795 to $11,000
Maintenance: On-site, Distributors
Date First Installed: October 1978
Number Installed to Date: 400
(See Vendor Profile Page V-14)

MUSYS CORP.
SR/1
Micro
Word Length: 8-bit
Operating System: TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 150M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,000 to $36,000
Maintenance: Third-party
Date First Installed: May 1983
(See Vendor Profile Page V-14)

MUSYS CORP.
ST/1
Micro
Word Length: 8-bit
Operating System: TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,000 to $18,000
Maintenance: Third-party
Date First Installed: May 1983

NCR CORP.
DECISION MATE V
Personal
Word Length: 8/16-bit
Operating System: CP/M 80, MS-DOS, CP/M 86
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Maximum On-Line Storage: 96M bytes
Communications Protocols: Asynchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,800 to $3,340
Maintenance: On-site
Date First Installed: April 1983
(See Vendor Profile Page V-14)

NEC INFORMATION SYSTEMS
APC
Desktop
Word Length: 16-bit
Operating System: CP/M, MS-DOS
Languages Supported: Cobol, Basic, RPG
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,300
Maintenance: On-site, Third-party
Date First Installed: July 1982
(See Vendor Profile Page V-15)

NEC INFORMATION SYSTEMS
ASTRA 200
Desktop
Word Length: 16-bit
Operating System: ITOS
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 9.2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $6,500
Maintenance: On-site, Third-party
Average Maintenance Fee: $90
Date First Installed: June 1982

NSC INFORMATION SYSTEMS
PC 8000
Personal
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, Pascal, RPG, APL, PL/1, Bliss, Coral, C
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 640K bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user, OEM, Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $1,000 to $3,600
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: January 1978
Number Installed to Date: 10,000 — 50,000

NIAGARA SCIENTIFIC, INC.
DATKON 700 SERIES
Micro
Word Length: 8-bit
Languages Supported: Assembler
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 4
Communications Protocols: Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $15,000
Maintenance: On-site
Date First Installed: January 1978
Number Installed to Date: 250
(See Vendor Profile Page V-15)

NNC ELECTRONICS
53
Micro
Word Length: 8-bit
Operating System: OASIS, MP/M, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 166M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $8,200 to $15,000
Maintenance: Third-party
Average Maintenance Fee: $145
Date First Installed: 1979
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-15)

NNC SLECTRONICS
80
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 166M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,200 to $15,000
Maintenance: Third-party
Average Maintenance Fee: $100
Date First Installed: 1978
Number Installed to Date: 100 — 500

NNC ELECTRONICS
80W
Micro
Word Length: 8-bit
Operating System: OASIS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 166M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,399 to $12,000
Maintenance: Third-party
Average Maintenance Fee: $120
Date First Installed: 1978
Number Installed to Date: 100 — 500

NON LINEAR SYSTEMS, INC.
KAYPRO 10
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,795
Maintenance: Sorbus, Inc
Date First Installed: March 1983
(See Vendor Profile Page V-15)

NON LINEAR SYSTEMS, INC.
KAYPRO II
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 191K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,795
Maintenance: Sorbus, Inc
Date First Installed: May 1982
Number Installed to Date: 50,000 — 100,000

NORDEN SYSTEMS
LSI-11M
Micro
Word Length: 16-bit
Operating System: RSTS
Languages Supported: Fortran, Basic
Minimum Memory: 4K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 11
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $40,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1976
(See Vendor Profile Page V-15)

NORTHERN TELECOM, INC.
500
Desktop
Word Length: 8-bit
Operating System: CP/M

Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $4,795 to $13,000
Maintenance: On-site
Date First Installed: November 1981
(See Vendor Profile Page V-15)

NORTHENN TELECOM, INC.
585
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 315K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 54M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $46,900
Maintenance: On-site
Date First Installed: June 1981

NORTHSTAR COMPUTERS, INC.
ADVANTAGE
Desktop
Word Length: 8-bit
Operating System: TBS, MS-DOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,599 to $5,999
Maintenance: Return to manufacturing facility, Third-party
Average Maintenance Fee: $110
Date First Installed: September 1981
Number Installed to Date: 10,000 — 50,000
(See Vendor Profile Page V-15)

NORTHSTAR COMPUTERS, INC.
ADVANTAGE 8/16
Desktop
Word Length: 8-bit
Operating System: TBS, MS-DOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 320K bytes
Multiple Users: No
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,599 to $5,999
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $110
Date First Installed: December 1982

NORTHSTAR COMPUTERS, INC.
HORIZON
Desktop
Word Length: 8-bit
Operating System: DOS, CP/M, TBS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 54K bytes
Maximum Memory: 320K bytes
Multiple Users: No
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,599
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $110
Date First Installed: December 1977
Number Installed to Date: 10,000 — 50,000

NORTHSTAR COMPUTERS, INC.
HORIZON MULTIUSER
Desktop
Word Length: 8-bit
Operating System: TSS/C, DOS, TSS/A, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 320K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 32
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,599 to $5,999
Maintenance: On-site, Return to manufacturing facility, Third-party
Average Maintenance Fee: $110
Date First Installed: January 1981
Number Installed to Date: 10,000 — 50,000

NOVELL DATA MANAGEMENT, INC.
SHARENET
Desktop
Word Length: 32-bit
Operating System: CP/M, SHARENET, MP/M
Languages Supported: Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 30
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,995
Maintenance: On-site, Third-party
Date First Installed: 1982
(See Vendor Profile Page V-15)

OAKLEAF, INC.
OPU
Micro
Word Length: 18-bit
Operating System: Proprietary
Languages Supported: Basic, FPL
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 30M bytes
Maximum I/O Ports: 8
Communications Protocols: HDLC, Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,900 to $25,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: January 1983
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-15)

OAKLEAF, INC.
MP-16
Micro
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: Basic, FPL
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 30M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $10,900 to $25,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: January 1982
Number Installed to Date: 2,200

OAKLEAF, INC.
SX-350
Micro
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Basic, FPL
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 30M bytes
Maximum I/O Ports: 8
Communications Protocols: HDLC, Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $8,500
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: August 1982
Number Installed to Date: 1,200

OBSERVATIONAL SYSTEMS, INC.
OS-3
Hand-held
Word Length: 8-bit
Operating System: Proprietary
Minimum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 16M bytes

Maximum I/O Ports: 1
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $2,500
Maintenance: Return to manufacturing facility
Date First Installed: December 1981
Number Installed to Date: 300
(See Vendor Profile Page V-15)

OLYMPIA U.S.A., INC.
PORTABLE COMPUTER
Portable
Word Length: 8-bit
Operating System: SNAP
Languages Supported: Basic, Forth
Minimum Memory: 4K bytes
Maximum Memory: 116K bytes
Multiple Users: No
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $380 to $1,700
Maintenance: Return to manufacturing facility
Date First Installed: June 1982
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-15)

OMNIDAYA
OMNI III
Micro
Word Length: 16-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 160K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,500 to $5,500
Maintenance: On-site
Date First Installed: October 1982
(See Vendor Profile Page V-15)

ONYX SYSTEMS
C5001/MU
Desktop
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,850 to $9,350
Maintenance: RCA Corp
Date First Installed: April 1981
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-15)

ONYX SYSTEMS
C5001A
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS MP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,990 to $6,740
Maintenance: RCA Corp

ONYX SYSTEMS
C5002A
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $11,990 to $13,990
Maintenance: RCA Corp

ONYX SYSVEMS
C8001/MU
Desktop
Word Length: 8-bit
Operating System: CP/M, OASIS MP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Purchase Price: $11,490 to $13,990
Maintenance: RCA Corp
Date First Installed: October 1980
Number Installed to Date: 1,000 — 5,000

ONYX SYSTEMS
C8002A
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $13,990 to $17,490
Maintenance: RCA Corp.

ONYX SYSTEMS
SUNDANCE
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,950 to $9,450
Maintenance: RCA Corp
Date First Installed: June 1981
Number Installed to Date: 1,000 — 5,000

ONYX SYSTEMS
SUNDANCE 16
Micro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $13,990 to $16,490
Maintenance: RCA Corp
Date First Installed: June 1981
Number Installed to Date: 500 — 1,000

ONYX SYSVEMS
SUNDANCE II
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,550 to $11,550
Maintenance: RCA Corp

ONYX SYSTEMS
SYSTEM 2000
Micro
Word Length: 16-bit
Operating System: MP/M 86, BBOS, OASIS 16
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 42M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,250 to $11,990

ONYX SYSTEMS
SYSTEM 3000
Micro
Word Length: 16-bit
Operating System: OASIS 16, BBOS
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,250 to $18,500
Maintenance: RCA Corp

ONYX SYSVEMS
SYSTEM 4000
Micro
Word Length: 16-bit
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $15,000 to $19,750
Maintenance: RCA Corp

ONYX SYSTEMS
SYSTEM 5000
Micro
Word Length: 16-bit
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 160M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $32,300

OSBORNE COMPUTER CORP.
OSBORNE I
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 370K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,795 to $1,995
Maintenance: Return to manufacturing facility
Date First Installed: March 1981
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-15)

OSM COMPUTER CORP.
ZEUS 4
Desktop
Word Length: 8-bit
Operating System: MUSE, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1,
Minimum Memory: 64K bytes
Maximum Memory: 300K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 30M bytes

Maximum I/O Ports: 12
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,600 to $6,600
Maintenance: Third-party
Date First Installed: November 1982
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-16)

OTRONA CORP.
ATTACHE
Portable
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,995
Maintenance: Third-party
Date First Installed: March 1982
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-16)

OXBRIDGE, INC.
MODEL 16
Micro
Specific Application: Instrumentation
Word Length: 8-bit
Operating System: C, Assembler
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 16K bytes
Maximum Memory: 126K bytes
Multiple Users: No
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2 000 to $5,000
Maintenance: On-site
Date First Installed: July 1976
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-16)

OXBRIDGE, INC.
MODEL 32
Micro
Specific Application: Image Analysis
Word Length: 16-bit
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 500K bytes
Multiple Users: Yes
Maximum I/O Ports: 24
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $20,000
Maintenance: On-site
Date First Installed: September 1982
Number Installed to Date: 500 — 1,000

PANASONIC INDUSTRIAL CO.
JR200
Personal
Word Length: 8-bit
Operating System: BASIC
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $349 to $1,470
Maintenance: Return to manufacturing facility
(See Vendor Profile Page V-16)

PANASONIC INDUSTRIAL CO.
THE LINK HHC
Hand-held
Word Length: 8-bit
Operating System: BASIC
Languages Supported: Basic
Minimum Memory: 4K bytes
Maximum Memory: 8K bytes
Multiple Users: No
Maximum On-Line Storage: 48M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $700
Maintenance: Return to manufacturing facility
Date First Installed: January 1982

PASCO INTERNATIONAL, INC.
PI-1000
Micro
Specific Application: Access Control
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: 1980
(See Vendor Profile Page V-16)

PASCO INTERNATIONAL, INC.
PI-2000
Micro
Specific Application: Security, Access Control
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: 1980

PASCO INTERNATIONAL, INC.
PI-3000
Micro
Specific Application: Security, Access Control
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: 1980

PCE SYSTEMS
PCE SYSTEMS
Micro
Word Length: 8-bit
Operating System: CP/M, MUOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 47M bytes
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10 000 to $30 000
Maintenance: On-site, Third-party
Average Maintenance Fee: $170
Date First Installed: 1976
(See Vendor Profile Page V-16)

PDS TECHNOLOGIES, INC.
PDS TECHNOLOGIES
Micro
Word Length: 8-bit
Languages Supported: Pascal, Assembly
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $125,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1981
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-16)

PENTEL OF AMERICA, LTD.
PS-850
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $13 000
Maintenance: On-site
Date First Installed: June 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-16)

PERKIN-ELMER CORP.
MODEL 7500
Desktop
Word Length: 16-bit
Operating System: IDRIS
Languages Supported: Fortran, Basic, C
Maximum Memory: 640K bytes
Multiple Users: Yes
Maximum On-Line Storage: 10M bytes
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8 400 to $12 400
Maintenance: On-site
Date First Installed: 1983
(See Vendor Profile Page V-16)

PERSONAL MICRO COMPUTERS, INC.
ELEC EPS-80
Word Processing system
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 48K bytes
Maximum Memory: 48K bytes
Multiple Users: No
Communications Protocols: None
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1 900
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1982
(See Vendor Profile Page V-16)

PERSONAL MICRO COMPUTERS, INC.
MICRO MATE
Portable
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Basic
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 1.5M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2 000 to $4 000
Maintenance: Return to manufacturing facility, Third-party
Number Installed to Date: 10,000 — 50 000

PERSONAL MICRO COMPUTERS, INC.
PMC-80
Desktop
Word Length: 8-bit
Operating System: TRS-DOS, DOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 16K bytes
Maximum Memory: 48K bytes
Multiple Users: No
Maximum On-Line Storage: 500K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $875 to $2 000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1980
Number Installed to Date: 10 000 — 50,000

PERSONAL MICRO COMPUTERS, INC.
PMC-81
Desktop
Word Length: 8-bit
Operating System: TRS-DOS DOS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 16K bytes
Maximum Memory: 48K bytes

Multiple Users: No
Maximum On-Line Storage: 500K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $875 to $2,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1981
Number Installed to Date: 10,000 — 50,000

PERTEC COMPUTER CORP.
PCC 2000
Desktop
Word Length: 8-bit
Operating System: MTX
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 5
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $13,120
Maintenance: Third-party
Date First Installed: September 1978
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-16)

PHAZE INFORMATION MACHINES CORP.
P5002
Micro
Word Length: 16-bit
Operating System: MS-DOS 1.25
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,195
Maintenance: Western Union
Date First Installed: January 1983
Number Installed to Date: 10
(See Vendor Profile Page V-16)

PHAZE INFORMATION MACHINES CORP.
P5010
Micro
Word Length: 16-bit
Operating System: MS-DOS 1.25
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,740
Maintenance: Western Union
Date First Installed: January 1983

PHC, INC.
OPT-RM
Micro
Word Length: 8-bit
Operating System: OPTI-BASIC
Languages Supported: Opti-Basic
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 4M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $11,000 to $20,000
Maintenance: On-site
Average Maintenance Fee: $150
Date First Installed: August 1981
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-16)

PHOENIX DIGITAL CORP.
DP SERIES 60
Micro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Basic, Pascal, C, Assembly
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 14
Communications Protocols: Synchronous, Bisynchronous, SDLC, HDLC
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $5,000 to $6,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $48
Date First Installed: 1979
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-16)

PHOENIX DIGITAL CORP.
DP SERIES 80
Micro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Basic, Pascal, C, Assembly
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 24
Communications Protocols: Synchronous, Bisynchronous, SDLC, HDLC
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $5,000 to $8,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $56
Date First Installed: 1979
Number Installed to Date: 500 — 1,000

PHOENIX DIGITAL CORP.
SERIES 1000
Micro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Basic, Pascal, C, Assembler
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 160M bytes
Maximum I/O Ports: 100
Communications Protocols: Synchronous, Bisynchronous, SDLC, HDLC
Distribution: Third-party
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $8,000 to $15,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Average Maintenance Fee: $80
Date First Installed: 1979
Number Installed to Date: 500 — 1,000

PHOENIX MICROSYSTEMS, INC.
PHOENIX MICRO SYSTEM
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 526M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility
Date First Installed: December 1981
Number Installed to Date: 100

PLESSEY PERIPHERAL SYSTEMS
SYSTEM-13 SV SERIES
Micro
Word Length: 16-bit
Operating System: RT-11/TSK+, RSX-11, MUMPS, RSTS/E
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, RPG, APL
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes
Maximum On-Line Storage: 84M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
(See Vendor Profile Page V-16)

PLESSEY PERIPHERAL SYSTEMS
SYSTEM-23 V SERIES
Micro
Word Length: 16-bit
Operating System: RT-11, RSTS/E; RSX-11M, PCS 100
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, RPG, APL
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 28M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase

POLARIS MICROCOMPUTERS, INC.
MICROSCRIPT
Micro
Word Length: 16-bit
Operating System: CP/M, F-DOS
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 2
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $15,000
Maintenance: On-site
Average Maintenance Fee: $125
Date First Installed: January 1979
Number Installed to Date: 250
(See Vendor Profile Page V-17)

POLYMORPHIC SYSTEMS
8810
Micro
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 360K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,595 to $8,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1978
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-17)

POLYMORPHIC SYSTEMS
8810/2
Micro
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,439 to $8,800
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1982
Number Installed to Date: 1,000 — 5,000

POLYMORPHIC SYSTEMS
8813
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes

Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase; Lease
Purchase Price: $5,595 to $11,000
Maintenance: Return to manufacturing facility. Third-party
Date First Installed: 1977
Number Installed to Date: 500 — 1,000

POLYMORPHIC SYSTEMS
TWIN SYSTEMS
Micro
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Fortran, Basic, Pascal
Minimum Memory: 32K bytes
Maximum Memory: 104K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 2.5M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $9,995 to $15,000
Maintenance: Return to manufacturing facility. Third-party
Date First Installed: July 1978
Number Installed to Date: 1,000 — 5,000

PRODUCT ASSOCIATES, INC.
Z-DISK
Micro
Word Length: 8-bit
Operating System: CP/NET, COMSTAR
Languages Supported: Cobol; Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $10,000
Maintenance: On-site, Third-party
Date First Installed: February 1982
Number Installed to Date: 500
(See Vendor Profile Page V-17)

PROLINK CORP.
PROLINK
Word Processing system
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 64
Maximum On-Line Storage: 640M bytes
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $25,000 to $150,000
Maintenance: Return to manufacturing facility
Date First Installed: April 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-17)

PRO-LOG CORP.
ABL1-101
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,335
Maintenance: On-site
Date First Installed: April 1983
(See Vendor Profile Page V-17)

PRO-LOG CORP.
ABL1-102
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,335
Maintenance: On-site
Date First Installed: April 1983

PRO-LOG CORP.
ABL1-151
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,335
Maintenance: On-site
Date First Installed: April 1983

PRO-LOG CORP.
ABL1-152
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,335
Maintenance: On-site
Date First Installed: April 1983

PRO-LOG CORP.
ABL1-201
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,295
Maintenance: On-site
Date First Installed: April 1983

PRO-LOG CORP.
ABL1-202
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,295
Maintenance: On-site
Date First Installed: April 1983

PRO-LOG CORP.
ABL1-251
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site
Date First Installed: April 1983

PRO-LOG CORP.
ABL1-252
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 3.2G bytes
Maximum I/O Ports: 40
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,335
Maintenance: On-site
Date First Installed: April 1983

PRONTO COMPUTERS, INC.
PRONTO 16/10
Desktop
Word Length: 16-bit
Operating System: MS-DOS 2.0
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 800K bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,995
Maintenance: On-site, Third-party
(See Vendor Profile Page V-17)

PRONTO COMPUTERS, INC.
PRONTO 16/20
Desktop
Word Length: 16-bit
Operating System: MS-DOS 2.0
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 1.6M bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,750
Maintenance: On-site, Third-party

PRONTO COMPUTERS, INC.
PRONTO 16/110
Desktop
Word Length: 16-bit
Operating System: MS-DOS 2.0
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 6.1M bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,995
Maintenance: On-site, Third-party

PROPHET 21
PROPHET 21 MODEL 3
Multimicro
Specific Application: General Purpose
Word Length: 16-bit
Operating System: PROPHET 21
Languages Supported: Basic Prophet 21
Minimum Memory: 64K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase; Rental, Lease
Purchase Price: $48,000
Maintenance: On-site, Remote diagnostics
Date First Installed: April 1983
(See Vendor Profile Page V-17)

PROPHET 21
PROPHET 21 MODEL 4
Multimicro
Word Length: 16-bit
Operating System: PROPHET 21
Languages Supported: Basic, Prophet 21

Minimum Memory: 64K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 320M bytes
Communications Protocols: Asynchronous
Distribution: End user
Maintenance: On-site, Remote diagnostics
Date First Installed: June 1983

PROPHET 21
PROPHET 21 MODEL 8
Multimicro
Word Length: 16-bit
Operating System: PROPHET 21
Languages Supported: Basic Prophet 21
Multiple Users: Yes, 2
Maximum On-Line Storage: 1.2G bytes
Maximum I/O Ports: 150
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Remote diagnostics
Date First Installed: June 1983

PSI TECH
GB 2020
Micro
Word Length: 8/16-bit
Operating System: SDOS
Languages Supported: Basic, Pascal
Minimum Memory: 119K bytes
Maximum Memory: 455K bytes
Multiple Users: Yes, 7
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $9,500 to $12,000
Maintenance: Return to manufacturing facility
Date First Installed: January 1982
Number Installed to Date: 500
(See Vendor Profile Page V-17)

PSI TECH
GTC 1609
Micro
Word Length: 8/16-bit
Operating System: SDOS
Languages Supported: Basic, Pascal
Minimum Memory: 119K bytes
Maximum Memory: 455K bytes
Multiple Users: Yes, 7
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $9,500 to $12,000
Maintenance: On-site, Third-party
Date First Installed: June 1980
Number Installed to Date: 2,000

PSI TECH
GTM 809
Micro
Word Length: 8/16-bit
Operating System: SDOS
Languages Supported: Basic, Pascal
Minimum Memory: 119K bytes
Maximum Memory: 231K bytes
Multiple Users: Yes, 7
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,500 to $10,000
Maintenance: Return to manufacturing facility
Date First Installed: June 1979
Number Installed to Date: 1,000

PSI TECH
GTM 1609
Micro
Word Length: 8/16-bit
Operating System: S-DOS
Languages Supported: Basic, Pascal
Minimum Memory: 119K bytes
Maximum Memory: 455K bytes
Multiple Users: Yes, 7
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $9,000 to $11,000
Maintenance: On-site, Third-party
Date First Installed: April 1979
Number Installed to Date: 1,800

QDP COMPUTER SYSTEMS
QDP-100
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 3.2M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,695 to $11,845
Maintenance: General Electric Co
Date First Installed: March 1979
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-17)

QDP COMPUTER SYSTEMS
QDP-200
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 1.7M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,995 to $7,845
Maintenance: General Electric Co
Date First Installed: October 1982
Number Installed to Date: 500 — 1,000

QDP COMPUTER SYSTEMS
QDP-300
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 1.7M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,995 to $8,245
Maintenance: On-site, Third-party
Date First Installed: January 1983
Number Installed to Date: 10 — 50

QEI, INC.
QUICE III
Micro
Word Length: 8-bit
Languages Supported: Assembler
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $50,000
Maintenance: On-site, Return to manufacturing facility
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-17)

QUASAR CO.
HK-2500
Hand-held
Word Length: 6-bit
Operating System: SNAT
Languages Supported: Basic, Porta-flex
Minimum Memory: 2K bytes
Maximum Memory: 2K bytes
Multiple Users: No
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $329
Maintenance: Return to manufacturing facility
Date First Installed: February 1982
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-17)

QUASAR CO.
HK-2600
Hand-held
Word Length: 8-bit
Operating System: SNAT
Languages Supported: Basic, Porta-flex
Minimum Memory: 4K bytes
Maximum Memory: 4K bytes
Multiple Users: No
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $379
Maintenance: Return to manufacturing facility
Date First Installed: February 1982
Number Installed to Date: 500 — 1,000

QUASAR CO.
HK2608
Hand-held
Word Length: 8-bit
Operating System: SNAT
Languages Supported: Basic, Porta-flex
Minimum Memory: 8K bytes
Maximum Memory: 8K bytes
Multiple Users: No
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $479
Maintenance: Return to manufacturing facility
Date First Installed: June 1982
Number Installed to Date: 500 — 1,000

QUAY CORP.
500
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 208K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 400M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,500
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1981
(See Vendor Profile Page V-18)

QUAY CORP.
520
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 208K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 800M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1981

QUAY CORP.
540
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C

Minimum Memory: 64K bytes
Maximum Memory: 208K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 1 6G bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,600
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: January 1982

QUAY CORP.
900
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 208K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 90M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,995
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1980

QUAY CORP.
900/33
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 208K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 33M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1980

QUAY CORP.
910
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, C
Minimum Memory: 64K bytes
Maximum Memory: 208K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,500
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: September 1982

QUAY CORP.
950
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 208K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,995
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: January 1983

QUEST ELECTRONICS
SUPER ELF
Micro
Word Length: 8-bit
Operating System: CMOS
Languages Supported: Basic, Assembler
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 5
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $106 to $320
(See Vendor Profile Page V-18)

Q1 CORP.
Q1-68000 DESKTOP
Desktop
Word Length: 16-bit
Operating System: UNIX
Languages Supported: C-Basic
Minimum Memory: 256K bytes
Maximum Memory: 2 2M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 154M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $13,000 to $500,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $300
Date First Installed: May 1982
Number Installed to Date: Less than 10
(See Vendor Profile Page V-17)

RADIAN CORP.
MP3
Micro
Specific Application: Communications Processor
Word Length: 8-bit
Minimum Memory: 20K bytes
Maximum Memory: 20K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $4,100 to $15,000
Maintenance: On-site
Date First Installed: 1982
(See Vendor Profile Page V-18)

RADIAN CORP.
UT-2
Micro
Specific Application: Communications Processor
Word Length: 8-bit
Minimum Memory: 20K bytes
Maximum Memory: 60K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $24,200 to $50,000
Maintenance: On-site
Date First Installed: 1975

RADIAN CORP.
UT-3
Micro
Specific Application: Communications Processor
Word Length: 8-bit
Minimum Memory: 20K bytes
Maximum Memory: 60K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $14,250 to $50,000
Maintenance: On-site
Date First Installed: 1977

RADIX CORP.
UTILICORDER
Hand-held
Word Length: 8-bit
Languages Supported: Assembler
Minimum Memory: 32K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $10,000
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $100
Date First Installed: January 1977
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-18)

RAIR MICROCOMPUTER CORP.
BLACK BOX 3/20S
Desktop
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,500
Date First Installed: May 1981
(See Vendor Profile Page V-18)

RAIR MICROCOMPUTER CORP.
BLACK BOX 3/30S
Desktop
Operating System: Proprietary
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum On-Line Storage: 6M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Date First Installed: May 1981

RAIR MICROCOMPUTER CORP.
BLACK BOX 3/50S
Desktop
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 19M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase

RAIR MICROCOMPUTER CORP.
BLACK BOX 3/60S
Desktop
Word Length: 16-bit
Operating System: Proprietary
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 19M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase

RAMTEK CORP.
6214 COLORGRAPHIC
Micro
Specific Application: Graphics
Word Length: 8-bit
Operating System: UCSD-P
Languages Supported: Pascal
Minimum Memory: 64K bytes
Maximum Memory: 352K bytes
Maximum On-Line Storage: 15M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site
(See Vendor Profile Page V-18)

RASTER GRAPHICS, INC.
RG-802
Micro
Word Length: 8-bit
Operating System: CP/M 2 2
Languages Supported: Cobol, Fortran, Basic, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 4M bytes
Maximum I/O Ports: 3
Communications Protocols: Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,000
Maintenance: Return to manufacturing facility
Date First Installed: January 1983
(See Vendor Profile Page V-18)

Micros

RECOGNITION EQUIPMENT, INC.
TARTAN
Micro
Specific Application: Data Entry
Word Length: 8-bit
Operating System: TARTAN CP/M
Languages Supported: Cobol, Fortran, Basic, Assembler
Minimum Memory: 64K bytes
Multiple Users: Yes
Communications Protocols: Asynchronous, Bisynchronous SDLC, 3270, 3780
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $75,000
Maintenance: On-site
Average Maintenance Fee: $510
Date First Installed: October 1982
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-18)

REYNOLDS & REYNOLDS CO.
TC 1000
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,000 to $6,000
Maintenance: On-site
Average Maintenance Fee: $50
Date First Installed: July 1980
Number Installed to Date: 7,200
(See Vendor Profile Page V-18)

REYNOLDS & REYNOLDS CO.
VIM NET
Supermicro
Word Length: 16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 60M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $17,000 to $100,000
Maintenance: On-site
Average Maintenance Fee: $350
Date First Installed: July 1982
Number Installed to Date: 100 — 500

RZE OF AMERICA, INC.
9050
Desktop
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,500
Maintenance: Return to manufacturing facility
Date First Installed: September 1982
(See Vendor Profile Page V-18)

SAGE COMPUTER TECHNOLOGY
SAGE 2
Micro
Word Length: 16-bit
Operating System: CP/M, UCSD-P
Languages Supported: Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 1.6M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,600 to $5,150
Maintenance: On-site, Return to manufacturing facility
Date First Installed: March 1982
Number Installed to Date: 700
(See Vendor Profile Page V-18)

SAGE COMPUTER TECHNOLOGY
SAGE 4
Micro
Word Length: 16-bit
Operating System: CP/M, UCSD-P
Languages Supported: Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,600 to $8,550
Maintenance: On-site, Return to manufacturing facility
Date First Installed: March 1983

SANYO BUSINESS SYSTEMS CORP.
MBC 1000
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $2,500
Maintenance: Third-party
Date First Installed: May 1982
Number Installed to Date: 3,000
(See Vendor Profile Page V-18)

SANYO BUSINESS SYSTEMS CORP.
MBC 2000
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,495
Maintenance: Third-party
Date First Installed: May 1982
Number Installed to Date: 600 — 1,000

SANYO BUSINESS SYSTEMS CORP.
MBC 3000
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: S-Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Vendor Sales Terms: Purchase
Purchase Price: $4,995 to $6,500
Maintenance: Third-party
Date First Installed: June 1982
Number Installed to Date: 1,000 — 5,000

SCIENTIFIC DATA SYSTEMS, INC.
SDS 400 SERIES
Desktop
Word Length: 8-bit
Operating System: SDS/DOS
Languages Supported: Basic, Assembler
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 62M bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,400
Maintenance: On-site, Third-party
Average Maintenance Fee: $84
Date First Installed: March 1979
(See Vendor Profile Page V-18)

SCIENTIFIC DATA SYSTEMS, INC.
SDS 4000
Desktop
Word Length: 8-bit
Operating System: SDS/DOS
Languages Supported: Cobol, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 62M bytes
Maximum I/O Ports: 10
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,400
Maintenance: On-site, Third-party
Date First Installed: July 1982

SCIENTIFIC MICRO SYSTEMS, INC.
DSX-11
Micro
Word Length: 16-bit
Operating System: RT-11, UNIX, RSX-11M, RSX+
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $18,000
Maintenance: On-site
Date First Installed: June 1979
Number Installed to Date: 2,000
(See Vendor Profile Page V-18)

SCIENTIFIC MICRO SYSTEMS, INC.
DSX-80
Micro
Word Length: 16-bit
Operating System: IRMX 86, CP/M 86
Languages Supported: PLM
Minimum Memory: 128K bytes
Maximum Memory: 2M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,400 to $20,000
Maintenance: Return to manufacturing facility
Date First Installed: April 1982
Number Installed to Date: 100 — 500

SCIENTIFIC MICRO SYSTEME, INC.
MDX-11
Micro
Word Length: 16-bit
Operating System: RT-11, UNIX, RSX-11M
Languages Supported: Cobol, Fortran, Basic, Pascal, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $10,000
Maintenance: On-site
Date First Installed: August 1982
Number Installed to Date: 500

SCIENTIFIC MICRO SYSTEMS, INC.
MDX-80
Micro
Word Length: 16-bit
Operating System: IRMX 86, CP/M 86
Languages Supported: PLM
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 17M bytes
Maximum I/O Ports: 1

Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,900 to $12,000
Maintenance: Return to manufacturing facility
Date First Installed: January 1983
Number Installed to Date: 50 — 100

SEAL & COMPANY, INC.
940-XX
Micro
Word Length: 8-bit
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 32
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,500 to $2,500
Maintenance: On-site
Date First Installed: October 1978
Number Installed to Date: 150
(See Vendor Profile Page V-18)

SEATTLE COMPUTER PRODUCTS
GAZELLE
Micro
Word Length: 16-bit
Operating System: MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Forth, Ada
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8 000
Maintenance: On-site
Date First Installed: September 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-18)

SEEQUA COMPUTER CORP.
CHAMELEON
Micro
Word Length: 8/16
Operating System: MS-DOS, CP/M 80, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 700K bytes
Multiple Users: Yes
Maximum On-Line Storage: 320K bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $2,500
Date First Installed: April 1983
(See Vendor Profile Page V-19)

SEEQUA COMPUTER CORP.
CHAMELEON PLUS
Micro
Word Length: 8/16-bit
Operating System: MS-DOS, CP/M 80, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 700K bytes
Multiple Users: Yes
Maximum On-Line Storage: 640K bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,695 to $3,500.
Date First Installed: 1983

SHARP ELECTRONICS CORP.
PC1500
Hand-held
Word Length: 8-bit
Operating System: SHARP S
Languages Supported: Basic
Maximum Memory: 16K bytes
Multiple Users: No
Maximum I/O Ports: 2
Vendor Sales Terms: Purchase
Purchase Price: $200 to $400
Maintenance: Return to manufacturing facility
Date First Installed: 1982
Number Installed to Date: 60,000
(See Vendor Profile Page V-19)

SIBTHORP SYSTEMS, INC.
CTL-100
Micro
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9,000 to $15,000
Maintenance: Return to manufacturing facility
Date First Installed: 1979
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-19)

SIBTHORP SYSTEMS, INC.
SPT-100
Micro
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 6
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase; Lease
Purchase Price: $7,500
Date First Installed: 1979
Number Installed to Date: 50 — 100

SIERRA NATIONAL CORP.
SIERRA 3000
Micro
Word Length: 8-bit
Operating System: CP/M
Language Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,490 to $3,500
Maintenance: Return to manufacturing facility; Third-party
Date First Installed: 1979
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-19)

SIERRA NATIONAL CORP.
SIERRA 4000
Micro
Word Length: 8-bit
Operating System: CP/M, LP NET, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 112M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,000 to $18,000
Maintenance: Return to manufacturing facility; Third-party
Date First Installed: 1979
Number Installed to Date: 100 — 500

SIERRA NATIONAL CORP.
SIERRA 5000
Micro
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 94M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, SDLC/SNA, X.25, HDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6 990 to $6,990
Maintenance: Return to manufacturing facility; Third-party
Date First Installed: 1979
Number Installed to Date: 100 — 500

SMOKE SIGNAL BROADCASTING
CHIEFTAIN
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,000 to $16,000
Maintenance: Return to manufacturing facility; Third-party
Date First Installed: March 1978
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-19)

SMOKE SIGNAL BROADCASTING
CHIEFTAIN 9W10T20
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Purchase Price: $11,200
Maintenance: Return to manufacturing facility, Third-party

SMOKE SIGNAL BROADCASTING
CHIEFTAIN 9W15T20
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 15M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $11,100
Maintenance: Return to manufacturing facility, Third-party

SMOKE SIGNAL BROADCASTING
CHIEFTAIN 9W30T20
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 30M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,900
Maintenance: Return to manufacturing facility Third-party

SMOKE SIGNAL BROADCASTING
CHIEFTAIN 9W60
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 60M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $11,800
Maintenance: Return to manufacturing facility, Third-party

Micros

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 9W60T200
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 60M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Purchase Price: $14,200
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 90
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,200
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 95W15
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Multiple Users: Yes, 10
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,200
Maintenance: Return to manufacturing facility, Third-party

SMOKE SIGNAL BROADCASTING
CHIEFTAIN 95W15T20
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $11,500

SMOKE SIGNAL BROADCASTING
CHIEFTAIN 96W4
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,100
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 95YW15
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,500
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 95YW15T20
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $11,700
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 96W15
Desktop
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 96W15
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $9,600
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 96W30
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes
Maximum On-Line Storage: 31M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $11,400
Maintenance: Return to manufacturing facility, Third-party

SMOKE SIGNAL BROADCASTING
CNIEFTAIN 96W60
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 61M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,200
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 96W60T20
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 61M bytes
Maximum I/O Ports: 2
Communications Protocols: Synchronous
Distribution: Third-party
Purchase Price: $15,400

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 9612
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,500
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 9622
Supermicro
Word Length: 16-bit
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Communications Protocols: Asynchronous, Synchronous
Purchase Price: $3,900

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 9524
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum On-Line Storage: 1.5M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,300
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 9612
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Basic, Pascal, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,525
Maintenance: Return to manufacturing facility, Third-party

SMOKS SIGNAL BROADCASTING
CHIEFTAIN 9622
Supermicro
Word Length: 16-bit
Operating System: OS/9
Languages Supported: Cobol, Forth
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 10
Maximum I/O Ports: 2
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: Return to manufacturing facility, Third-party

SONY COMMUNICATIONS PRODUCTS CO.
SMC-7D
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 768K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,500
Maintenance: On-site
Date First Installed: September 1982
(See Vendor Profile Page V-19)

SOUTHERN COMPUTER SYSTEMS, INC.
SCS-8000
Desktop
Word Length: 8/16-bit
Operating System: CP/M, MS-DOS, MP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic, RPG, PLMX, Assembly
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 24
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 24
Communications Protocols: Synchronous, Bisynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $7,000 to $25,000
Maintenance: On-site
Average Maintenance Fee: $130
Date First Installed: April 1980
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-19)

SOUTHWEST TECHNICAL PRODUCTS, INC.
S+
Micro
Word Length: 8-bit
Operating System: UNIFLEX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 5
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,250 to $14,000
Maintenance: On-site; Return to manufacturing facility
(See Vendor Profile Page V-19)

SOUTHWEST TECHNICAL PRODUCTS, INC.
S/08
Micro
Word Length: 8-bit
Operating System: UNIFLEX
Languages Supported: Cobol, Fortran, Basic, C, Uniflex, Flex Editor
Minimum Memory: 64K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes, 32
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,635 to $6,000
Maintenance: On-site, Return to manufacturing facility

SPECTRA SYSTEMS, INC.
SPECTRA 123
Desktop
Word Length: 16-bit
Operating System: RT-11, RSTS/E, CP/M, D RSX
Languages Supported: Cobol Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 4M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $12,000 to $20,000
Date First Installed: 1982
(See Vendor Profile Page V-19)

SPECTRA SYSTEMS, INC.
SPECTRA 866
Micro
Word Length: 8/16-bit
Operating System: CP/M, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $12,000
Maintenance: Third-party
Date First Installed: 1983

STEARN COMPUTER SYSTEMS
STEARN 3501 DESKTOP
Desktop
Word Length: 16-bit
Operating System: MS-DOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 160K bytes
Maximum Memory: 896K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 6
Communications Protocols: Bisynchronous, Micronet
Distribution: End user, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,800 to $9,650
Maintenance: On-site, Return to manufacturing facility, Dealers
(See Vendor Profile Page V-19)

SUN MICROSYSTEMS, INC.
SUN WORKSTATION 100
Micro
Word Length: 16-bit
Operating System: UNIX 4.2
Languages Supported: Fortran, Pascal, C
Multiple Users: No
Maximum On-Line Storage: 84M bytes
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $12,900 to $32,000
Maintenance: On-site
Average Maintenance Fee: $320
Date First Installed: September 1982
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-19)

SUN MICROSYSTEMS, INC.
SUN WORKSTATION 150
Micro
Word Length: 16-bit
Operating System: UNIX 4.2
Languages Supported: Fortran, Pascal, C
Multiple Users: No
Maximum On-Line Storage: 84M bytes
Communications Protocols: Asynchronous, 14
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $16,900 to $35,000
Maintenance: On-site
Average Maintenance Fee: $320
Date First Installed: September 1982
Number Installed to Date: 100 — 500

SYSCON INTERNATIONAL, INC.
SYSCON INT'L
Micro
Specific Application: Industrial Control
Word Length: 8-bit
Languages Supported: Assembly
Maximum Memory: 64K bytes
Multiple Users: Yes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,000 to $50,000
Maintenance: On-site, Return to manufacturing facility
(See Vendor Profile Page V-20)

SYSTEMS GROUP
2912
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2.5M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,175
Date First Installed: October 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-20)

SYSTEMS GROUP
2914
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2.5M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,700
Date First Installed: September 1981
Number Installed to Date: 100 — 500

SYSTEMS GROUP
2924
Micro
Word Length: 8-bit
Operating System: MP/M, CP/M, OASIS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 12
Maximum On-Line Storage: 2.2M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,325 to $8,500
Date First Installed: September 1981
Number Installed to Date: 100 — 500

SYSTEMS GROUP
2950
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,725
Date First Installed: December 1982
Number Installed to Date: 100 — 500

SYSTEMS GROUP
2951
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,150
Date First Installed: December 1982

Micros

SYSTEMS GROUP
2960
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M, BUSINESS EXPRESS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 1.1M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,270 to $11,000
Date First Installed: November 1982
Number Installed to Date: 100 — 500

SYSTEMS GROUP
2962
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M, BUSINESS EXPRESS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 1.7M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $8,690 to $12,000
Date First Installed: November 1982
Number Installed to Date: 50 — 100

SYSTEMS GROUP
2964
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M, BUSINESS EXPRESS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 31M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,945 to $15,000
Date First Installed: November 1982
Number Installed to Date: 50 — 100

SYSTEMS GROUP
2966
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M, BUSINESS EXPRESS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 3.2M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,650 to $15,000
Date First Installed: December 1982
Number Installed to Date: 50

SYSTEMS GROUP
2968
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M, BUSINESS EXPRESS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 50M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,080 to $15,000
Date First Installed: March 1983

SYSTEMS GROUP
2969
Micro
Word Length: 8-bit
Operating System: CP/M, OASIS, MP/M, BUSINESS EXPRESS
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 572K bytes
Multiple Users: Yes, 20
Maximum On-Line Storage: 3.2M bytes
Maximum I/O Ports: 20
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $13,750 to $17,000
Date First Installed: March 1983

TAB PRODUCTS CO.
830
Desktop
Word Length: 8-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,500
Maintenance: On-site, Return to manufacturing facility, Third-party
(See Vendor Profile Page V-20)

TAB PRODUCTS CO.
1630
Desktop
Word Length: 16-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous, 3740
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $7,785
Maintenance: On-site, Return to manufacturing facility, Third-party

TAB PRODUCTS CO.
1850
Desktop
Word Length: 16-bit
Operating System: CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 768K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Bisynchronous
Vendor Sales Terms: Purchase, Rental, Lease
Maintenance: On-site, Return to manufacturing facility, Third-party

TAK AUTOMATION, INC.
INSTRUMENTATION TECH
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Assembly
Minimum Memory: 65K bytes
Maximum Memory: 116K bytes
Multiple Users: No
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,500
Maintenance: Return to manufacturing facility
(See Vendor Profile Page V-20)

TAK AUTOMATION, INC.
TAK AUTOMATION
Micro
Specific Application: Process Control
Word Length: 18-bit
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Communications Protocols: X.25
Distribution: End user
Vendor Sales Terms: Purchase
Maintenance: On-site

TANDY CORP.
TRS-80 COLOR
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum On-Line Storage: 48M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $299
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1980
(See Vendor Profile Page V-20)

TANDY CORP.
TRS-80/II
Personal
Word Length: 8-bit
Operating System: TRS/DOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C-Basic
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 6
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,500
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $65
Date First Installed: May 1979
Number Installed to Date: 50,000 — 100,000

TANDY CORP.
TRS-80/III
Desktop
Word Length: 8-bit
Operating System: TRS/DOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C-Basic
Minimum Memory: 16K bytes
Maximum Memory: 48K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $700 to $2,200
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $20
Date First Installed: September 1981
Number Installed to Date: 50,000 — 100,000

TANDY CORP.
TRS-80/12
Desktop
Word Length: 8-bit
Operating System: TRS/DOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C-Basic
Minimum Memory: 80K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 53M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,450 to $6,500
Maintenance: On-site, Return to manufacturing facility
Date First Installed: January 1982

TANDY CORP.
TRS-80/16
Desktop
Word Length: 8/16-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 53M bytes
Maximum I/O Ports: 6
Communications Protocols: Asynchronous

Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,999 to $11,190
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $80
Date First Installed: 1982

TANO CORP.
TANO OUTPOST
Micro
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 320K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End uber
Vendor Sales Terms: Purchase
Purchase Price: $15,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1977
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-20)

TARBELL ELECTRONICS
EMPIRE I
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: PL/1, C-Basic, D-Basic
Minimum Memory: 48K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 6
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,661 to $6,730
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1980
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-20)

TARBELL ELECTRONICS
EMPIRE 6
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: C-Basic, D-Base 2
Minimum Memory: 48K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 6
Distribution: Third-party
Purchase Price: $5,333 to $8,920
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: 1980
Number Installed to Date: 100 — 500

TBM, INC.
QENNI
Micro
Word Length: 8-bit
Operating System: CP/M, TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Basic plus, Basic plus 2, Pascal, RPG, APL, PL/1, Coral, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 360M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Bisynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,500 to $26,000
Maintenance: On-site
Average Maintenance Fee: $185
Date First Installed: December 1979
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-20)

TECHNICO, INC.
TMF 16
Micro
Word Length: 16-bit
Operating System: MOS
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 192K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 18M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $4,390 to $9,995
Maintenance: On-site
Average Maintenance Fee: $60
Date First Installed: 1979
Number Installed to Date: 500

TECHNICO, INC.
TSC16
Micro
Word Length: 16-bit
Operating System: SCS
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $700 to $5,900
Maintenance: On-site
Average Maintenance Fee: $40
Date First Installed: 1977
Number Installed to Date: 2,000

TECMAR, INC.
TEC 86
Micro
Word Length: 16-bit
Operating System: CP/M 86, MP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Forms 2
Minimum Memory: 64K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,390
Maintenance: Return to manufacturing facility
Date First Installed: 1979
(See Vendor Profile Page V-20)

TECMAR, INC.
TEC 86MA
Micro
Word Length: 16-bit
Operating System: CP/M 86, MP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, Forms 2
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 33.4M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,595
Maintenance: Return to manufacturing facility
Date First Installed: 1979

TECMAR, INC.
TEC 86M4W
Micro
Word Length: 16-bit
Operating System: CP/M 86, MP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Forms 2
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 33.4M bytes
Maximum I/O Ports: 7
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $12,990
Maintenance: Return to manufacturing facility
Date First Installed: 1979

TECMAR, INC.
TEC 86W
Micro
Word Length: 16-bit
Operating System: CP/M 86, MP/M 86, MS-DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Forms 2
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 33.4M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $10,990
Maintenance: Return to manufacturing facility
Date First Installed: 1979

TECMAR, INC.
TEC LAB I
Micro
Word Length: 8-bit
Operating System: CP/M 80
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 2.4M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,645
Maintenance: Return to manufacturing facility
Date First Installed: 1979

TECMAR, INC.
TEC VI
Micro
Word Length: 8-bit
Operating System: CP/M 80
Languages Supported: Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,645
Maintenance: Return to manufacturing facility
Date First Installed: 1979

TEKTRONIX, INC.
4051
Desktop
Specific Application: Data Analysis
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $6,295 to $6,345
Maintenance: On-site, Return to manufacturing facility
Date First Installed: December 1975
Number Installed to Date: 10 000 — 50 000
(See Vendor Profile Page V-20)

TEKTRONIX, INC.
4052A
Desktop
Word Length: 16-bit
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum I/O Ports: 12
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $9,900 to $14,400
Maintenance: On-site, Return to manufacturing facility
Date First Installed: July 1979
Number Installed to Date: 500 — 1,000

TEKTRONIX, INC.
4054A
Desktop
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum I/O Ports: 12

Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase, Rental
Purchase Price: $14,950 to $18,450
Maintenance: On-site, Return to manufacturing facility
Date First Installed: July 1979

TEKTRONIX, INC.
4112A
Micro
Specific Application: CAD/CAM
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Fortran, Assembler
Minimum Memory: 32K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Purchase Price: $5,500 to $13,300
Maintenance: On-site, Return to manufacturing facility
Date First Installed: May 1981

TEKTRONIX, INC.
4113A
Micro
Specific Application: CAD/CAM
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 800K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $16,500 to $23,700
Maintenance: On-site, Return to manufacturing facility
Date First Installed: May 1981

TEKTRONIX, INC.
4114A
Micro
Specific Application: CAD/CAM Graphics
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Basic
Minimum Memory: 32K bytes
Maximum Memory: 800K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $17,900 to $25,100
Maintenance: On-site
Date First Installed: May 1981

TELCON INDUSTRIES, INC.
MAIL/COMP
Portable
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 12M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $3,795
Maintenance: Xerox Corp
(See Vendor Profile Page V-20)

TELCON INDUSTRIES, INC.
NOMIS 9
Portable
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 12M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $2,395
Maintenance: On-site, Xerox Corp

TELCON INDUSTRIES, INC.
NOMIS 12
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 12M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Purchase Price: $2,495
Maintenance: Xerox Corp

TELCON INDUSTRIES, INC.
ZORBA
Portable
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 800K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $1,995
Maintenance: Xerox Corp
Date First Installed: January 1983
Number Installed to Date: 100 — 500

TELECTRONIC, INC.
MUM
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $12,000
Maintenance: Return to manufacturing facility, Third-party
(See Vendor Profile Page V-20)

TELECTRONIC, INC.
SUM
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $2,500 to $15,000
Maintenance: Return to manufacturing facility, Third-party

TELECTRONIC, INC.
TEL-100
Micro
Specific Application: Pricing Telephone Calls
Word Length: 8-bit
Languages Supported: Bliss
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $3,500
Maintenance: Return to manufacturing facility; Third-party

TELEFILE COMPUTER PRODUCTS, INC.
TELEPAC
Micro
Specific Application: Communications
Word Length: 32-bit
Languages Supported: Fortran
Minimum Memory: 16K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 200
Maximum On-Line Storage: 4.8G bytes
Maximum I/O Ports: 566
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, HDLC
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $32,000
Maintenance: On-site
Date First Installed: April 1981
Number Installed to Date: 22
(See Vendor Profile Page V-20)

TELERAM COMMUNICATIONS CORP.

TELERAM 3000/1
Portable
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 128M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995
Maintenance: Return to manufacturing facility
Date First Installed: January 1983
(See Vendor Profile Page V-20)

TELERAM COMMUNICATIONS CORP.
TELERAM 3000/2
Portable
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 256M bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,595
Maintenance: Return to manufacturing facility
Date First Installed: January 1983

TELEVIDEO SYSTEMS, INC.
TELETOTE I
Micro
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 368K bytes
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,499
Maintenance: On-site
Date First Installed: 1983
(See Vendor Profile Page V-21)

TELEVIDEO SYSTEMS, INC.
TS800
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C, Algol, Forth
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum I/O Ports: 1
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,800
Maintenance: On-site
Date First Installed: 1981
Number Installed to Date: 100 — 500

TELEVIDEO SYSTEMS, INC.
TS802
Desktop
Word Length: 8-bit

Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C, Algol, Forth
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,495
Maintenance: On-site
Date First Installed: 1981
Number Installed to Date: 50 — 100

TELEVIDEO SYSTEMS, INC.
TS802H
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C, Algol, Forth
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $6,995
Maintenance: On-site
Date First Installed: December 1981

TELEVIDEO SYSTEMS, INC.
TS803
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C, Algol, Forth
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Maximum I/O Ports: 2
Communications Protocols: SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site

TELEVIDEO SYSTEMS, INC.
TS806/20
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C, Algol, Forth
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $17,000
Maintenance: On-site
Date First Installed: September 1981
Number Installed to Date: 100 — 500

TELEVIDEO SYSTEMS, INC.
TS1600
Desktop
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C, Forth, Algol
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site

TELEVIDEO SYSTEMS, INC.
TS1603H
Personal
Word Length: 16-bit
Operating System: MS-DOS, CP/M 86
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Maximum On-Line Storage: 2M bytes
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $4,495
Maintenance: On-site
Date First Installed: 1983

TESDATA, INC.
SMART
Micro
Specific Application: Network Management
Word Length: 16-bit
Operating System: CTOS
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 512K bytes
Maximum Memory: 512K bytes
Multiple Users: Yes
Maximum On-Line Storage: 80M bytes
Communications Protocols: Bisynchronous, SDLC/SNA, X.25, 2780/3780
Distribution: End user
Vendor Sales Terms: Purchase, Lease
Purchase Price: $75,000 to $172,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $340
Number Installed to Date: Less than 10
(See Vendor Profile Page V-21)

TEXAS INSTRUMENTS, INC.
99/4A
Personal
Word Length: 16-bit
Operating System: DX10
Languages Supported: Basic, Basic plus, Pascal, Logo, Pilot
Minimum Memory: 16K bytes
Maximum Memory: 48K bytes
Multiple Users: No
Maximum On-Line Storage: 270K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $1,500
Maintenance: Return to manufacturing facility
Date First Installed: 1981
(See Vendor Profile Page V-21)

TEXAS INSTRUMENTS, INC.
TI PROFESSIONAL
Personal
Word Length: 16-bit
Operating System: UCSD-P; CP/M 86, MS-DOS, MP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,595 to $7,000
Maintenance: On-site
Date First Installed: 1983

THOUGHTWORKS, INC.
TW-800
Micro
Word Length: 8-bit
Operating System: TURBO DOS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 600M bytes
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,275 to $20,000
Maintenance: On-site, Return to manufacturing facility
Average Maintenance Fee: $100
Date First Installed: 1983
(See Vendor Profile Page V-21)

3 R COMPUTERS, INC.
AVATAR TC1
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 16M bytes
Maximum I/O Ports: 4
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,795 to $3,095
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $20
Date First Installed: August 1982
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-21)

3 R COMPUTERS, INC.
AVATAR TC10
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 4
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,295 to $5,895
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $25
Date First Installed: January 1983
Number Installed to Date: 50 — 100

3 R COMPUTERS, INC.
AVATAR TC100
Micro
Word Length: 8/16-bit
Operating System: CP/M; CP/M 86, MS-DOS
Languages Supported: Basic, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 1.6M bytes
Maximum I/O Ports: 3
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,195 to $3,495
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $20
Date First Installed: April 1983
Number Installed to Date: Less than 10

3 R COMPUTERS, INC.
AVATAR TC110
Micro
Word Length: 8/16-bit
Operating System: CP/M, CP/M 86, MS-DOS
Languages Supported: Basic, Assembler
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 4
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $4,795 to $6,295
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $25
Date First Installed: April 1983
Number Installed to Date: Less than 10

3 R COMPUTERS, INC.
AVATAR TC3270
Micro
Word Length: 8/16-bit
Operating System: CP/M, CP/M 86, MS-DOS
Languages Supported: Basic, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 21M bytes
Maximum I/O Ports: 8
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $7,295
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $25
Date First Installed: March 1983
Number Installed to Date: Less than 10

TIMEX COMPUTER CORP.
SINCLAIR/1000
Personal
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 2K bytes
Maximum Memory: 16K bytes
Multiple Users: No

Maximum I/O Ports: 3
Distribution: Third-party
Purchase Price: $50
Maintenance: Third-party
Date First Installed: August 1982
Number Installed to Date: More than 100 000
(See Vendor Profile Page V-21)

TOSHIBA AMERICA, INC.
EW-100/2
Word Processing system
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.1M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,495
Maintenance: On-site, Third-party
(See Vendor Profile Page V-21)

TOSHIBA AMERICA, INC.
EW-100/4
Word Processing system
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.1M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $6,495
Maintenance: On-site, Third-party
Date First Installed: 1982

TOSHIBA AMERICA, INC.
T-100
Personal
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, T-Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 560K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $795 to $3,378
Maintenance: On-site, Third-party
Date First Installed: November 1982

TOSHIBA AMERICA, INC.
T-200
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, Microsoft Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 500K bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $5,190
Maintenance: On-site, Third-party
Date First Installed: June 1981
Number Installed to Date: 100 — 500

TOSHIBA AMERICA, INC.
T-250/4
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, Microsoft Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,995 to $5,290
Maintenance: On-site, Third-party
Date First Installed: June 1981
Number Installed to Date: 100 — 500

TPC, INC.
NH1000 SERIES
Micro
Specific Application: Transaction Processing
Word Length: 8-bit
Operating System: TURBO DOS, CP/M, MP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, PL/1
Minimum Memory: 64K bytes
Multiple Users: Yes
Maximum On-Line Storage: 280M bytes
Maximum I/O Ports: 64
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $37,000
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: January 1983
Number Installed to Date: Less than 10
(See Vendor Profile Page V-21)

TRIFORMATION SYSTEMS, INC.
BTS-2
Micro
Specific Application: Data Entry
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Lease
Purchase Price: $7,995
Maintenance: Return to manufacturing facility, Honeywell, Inc
Average Maintenance Fee: $75
Date First Installed: 1981
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-21)

TRIFORMATION SYSTEMS, INC.
MICRO BRAILLE 2400
Word Processing system
Specific Application: Braille Computing
Word Length: 8-bit
Minimum Memory: 10K bytes
Maximum Memory: 28K bytes
Multiple Users: No
Maximum I/O Ports: 2
Communications Protocols: Asynchronous
Distribution: End user, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,850
Maintenance: Return to manufacturing facility
Average Maintenance Fee: $25
Date First Installed: January 1983
Number Installed to Date: 10 — 50

TRIFORMATION SYSTEMS, INC.
VIP
Micro
Specific Application: Data Entry and Retrieval
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $7,410
Maintenance: Return to manufacturing facility, Honeywell, Inc
Average Maintenance Fee: $75
Date First Installed: January 1983
Number Installed to Date: Less than 10

UNICO, INC.
SYSTEM 4
Micro
Word Length: 12-bit
Operating System: Proprietary
Languages Supported: RTS
Minimum Memory: 8K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: 1975
Number Installed to Date: 50 — 100
(See Vendor Profile Page V-21)

UNICO, INC.
SYSTEM 5
Micro
Word Length: 12-bit
Operating System: Proprietary
Minimum Memory: 8K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility, Third-party
Date First Installed: 1978
Number Installed to Date: 100 — 500

UNICO, INC.
SYSTEM 6
Micro
Word Length: 12-bit
Languages Supported: RTS
Minimum Memory: 4K bytes
Maximum Memory: 32K bytes
Multiple Users: No
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Date First Installed: 1981
Number Installed to Date: 10 — 50

UNICOMP CORP.
PIXEL 100 AP
Supermicro
Word Length: 32-bit
Operating System: UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, C, Ada
Minimum Memory: 512K bytes
Maximum Memory: 6M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 340M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $19,000
Maintenance: On-site
Average Maintenance Fee: $200
Date First Installed: January 1982
Number Installed to Date: 1,000 — 5,000
(See Vendor Profile Page V-21)

UNITED TECHNOLOGIES COMDEV
TP-8100
Micro
Specific Application: Call Accounting
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 8M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: 1978
Number Installed to Date: 1,250
(See Vendor Profile Page V-21)

VECTOR GRAPHIC, INC.
4/20
Desktop
Word Length: 8-bit
Operating System: CP/M, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal

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Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $4,750
Maintenance: On-site, Third-party
Date First Installed: September 1982
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-21)

VECTOR GRAPHIC, INC.
4/30
Desktop
Word Length: 8-bit
Operating System: CP/M, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 5.6M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,995
Maintenance: On-site, Third-party
Date First Installed: September 1982
Number Installed to Date: 1,353

VECTOR GRAPHIC, INC.
4/40
Desktop
Word Length: 8-bit
Operating System: CP/M, CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 10.6M bytes
Maximum I/O Ports: 5
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Maintenance: Return to manufacturing facility, Third-party

VECTOR GRAPHIC, INC.
1600
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 64K bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $3,995
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: August 1980

VECTOR GRAPHIC, INC.
3005
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 5.6M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $5,495
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: January 1982
Number Installed to Date: 500 — 1,000

VECTOR GRAPHIC, INC.
3032
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Maximum On-Line Storage: 32.6M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $12,795
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: August 1981

VECTOR GRAPHIC, INC.
3100
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 1.2M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $5,795
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: July 1981

VECTOR GRAPHIC, INC.
3105
Desktop
Word Length: 8-bit
Operating System: C/PM
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 5.6M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $8,495
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: July 1981

VECTOR GRAPHIC, INC.
5005/E
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 5.6M bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $7,350 to $11,650
Maintenance: On-site, Return to manufacturing facility, Third-party
Date First Installed: May 1981
Number Installed to Date: 1,100

VECTOR GRAPHIC, INC.
5010/E
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 256K bytes
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $8,150 to $12,650
Maintenance: On-site, Third-party
Date First Installed: January 1983

VECTOR GRAPHIC, INC.
5032/E
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 28K bytes
Maximum Memory: 256K bytes
Multiple Users: Yes, 3
Maximum On-Line Storage: 32.6M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase, Lease
Purchase Price: $11,950 to $16,495
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: February 1982
Number Installed to Date: 307

VICTORY COMPUTER SYSTEMS, INC.
FACTOR 68/I
Supermicro
Specific Application: Instrumentation
Word Length: 16/32-bit
Operating System: UNIX III, VRTX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 4.2M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 29M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Purchase Price: $14,000
Maintenance: Third-party
Date First Installed: May 1983
(See Vendor Profile Page V-21)

VICTORY COMPUTER SYSTEMS, INC.
FACTOR 68/II
Supermicro
Word Length: 16/32-bit
Operating System: UNIX III, VRTX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 4.2M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 29M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: May 1983

VICTORY COMPUTER SYSTEMS, INC.
FACTOR 68/III
Supermicro
Specific Application: Instrumentation
Word Length: 16/32-bit
Operating System: UNIX III, VRTX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 4.2M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 52M bytes
Communications Protocols: Asynchronous, Bisynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Maintenance: Third-party
Date First Installed: May 1983

VICTORY COMPUTER SYSTEMS, INC.
FACTOR 68/IV
Supermicro
Specific Application: Instrumentation
Word Length: 16/32-bit
Operating System: UNIX III, VRTX
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 256K bytes
Maximum Memory: 4.2M bytes
Multiple Users: Yes
Maximum On-Line Storage: 98M bytes
Communications Protocols: Asynchronous
Distribution: OEM, Third-party
Vendor Sales Terms: Purchase
Date First Installed: May 1983

VICTORY COMPUTER SYSTEMS, INC.
VICTORY SPIRIT
Micro
Word Length: 16-bit
Operating System: CP/M 86, CP/M 80, MP/M 80
Languages Supported: Cobol; Fortran, Basic, Pascal; APL, PL/1, C, Algol, Forth
Minimum Memory: 256K bytes
Maximum Memory: 1.2M bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 80M bytes

Distribution: Third-party
Purchase Price: $14,000 to $26,000

WAVE MATE, INC.
BULLET
Desktop
Word Length: 8-bit
Operating System: CP/M 2.2; CP/M 3.0, MP/M 2.0, TURBO DOS
Languages Supported: Cobol, Fortran, Basic, Pascal, RPG, APL, PL/1, Bliss, Coral, C
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 20M bytes
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $3,995
Date First Installed: March 1982
Number Installed to Date: 2,000
(See Vendor Profile Page V-22)

WAVE MATE, INC.
SERIES 2000
Desktop
Word Length: 8-bit
Operating System: FLEX, MTS 6800, S/DOS
Languages Supported: Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $2,995 to $6,000
Date First Installed: February 1979

WESTERN DIGITAL CORP.
SB1600
Desktop
Word Length: 16-bit
Operating System: UCSD-P
Languages Supported: Pascal, Ada
Minimum Memory: 128K bytes
Maximum Memory: 512K bytes
Multiple Users: No
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,000 to $18,000
Maintenance: On-site
Date First Installed: March 1982
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-22)

WESTERN TELECOMPUTING CORP.
ICS 850
Micro
Specific Application: Air Quality Monitoring
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Custom, ICCS
Minimum Memory: 16K bytes
Maximum Memory: 32K bytes
Multiple Users: Yes, 2
Maximum On-Line Storage: 5M bytes
Maximum I/O Ports: 256
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,500 to $10,000
Maintenance: On call
Average Maintenance Fee: $35
Date First Installed: 1978
Number Installed to Date: 8,000
(See Vendor Profile Page V-22)

WICAT SYSTEMS, INC.
SYSTEM 150
Desktop
Word Length: 16/32-bit
Operating System: UNIX, MCS, CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, C, Assembler
Minimum Memory: 256K bytes
Maximum Memory: 1.5M bytes
Multiple Users: Yes, 8
Maximum On-Line Storage: 60M bytes
Maximum I/O Ports: 8
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, SDLC, X.25, HDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $8,500 to $16,500
Maintenance: On-site; Return to manufacturing facility
Average Maintenance Fee: $145
Date First Installed: October 1981
(See Vendor Profile Page V-22)

XEROX CORP.
820-II
Personal
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 11M bytes
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, 3780
Distribution: End user; Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,595 to $4,845
Maintenance: On-site, Remote diagnostics; Return to manufacturing facility
Date First Installed: July 1982
(See Vendor Profile Page V-22)

XITEK CORP.
XITEK M850
Micro
Word Length: 8-bit
Operating System: CP/M 2.2; CP/M 3.0
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 26M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $55 to $99
Maintenance: Return to manufacturing facility, Third-party
Average Maintenance Fee: $33
Date First Installed: June 1982
Number Installed to Date: 300
(See Vendor Profile Page V-22)

XYCOM, INC.
RACPAC-8
Micro
Word Length: 8-bit
Languages Supported: Basic
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 512K bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $4,900 to $13,000
Maintenance: On-site; Return to manufacturing facility
Date First Installed: November 1982
(See Vendor Profile Page V-22)

XYCOM, INC.
RACPAC-12
Micro
Word Length: 8-bit
Languages Supported: Basic, Eprom
Minimum Memory: 16K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 512K bytes
Maximum I/O Ports: 1
Communications Protocols: Asynchronous, Synchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,900 to $29,000
Maintenance: On-site; Return to manufacturing facility
Date First Installed: November 1982

ZAX CORP.
THE BOX
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Forth, PLM
Minimum Memory: 64K bytes
Maximum Memory: 812K bytes
Multiple Users: Yes, 4
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $5,995
Maintenance: Third-party
Date First Installed: December 1981
Number Installed to Date: 600
(See Vendor Profile Page V-22)

ZAX CORP.
THE BOX II
Desktop
Word Length: 16-bit
Operating System: CP/M 86, MS-DOS
Languages Supported: C
Minimum Memory: 64K bytes
Maximum Memory: 812K bytes
Multiple Users: Yes, 16
Maximum On-Line Storage: 40M bytes
Maximum I/O Ports: 18
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,995
Maintenance: Third-party
Date First Installed: March 1983

ZAX CORP.
THE BOX III
Desktop
Word Length: 16-bit
Operating System: CP/M 68000; UNIX
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Forth, PLM
Minimum Memory: 64K bytes
Maximum Memory: 812K bytes
Multiple Users: Yes
Maximum On-Line Storage: 40M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,995
Maintenance: Third-party
Date First Installed: October, 1983

ZEDA COMPUTERS INTERNATIONAL, LTD.
ZEDA 520
Desktop
Word Length: 8-bit
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $3,000
Maintenance: OEM
Average Maintenance Fee: $30
Date First Installed: February 1981
Number Installed to Date: 100 — 500
(See Vendor Profile Page V-22)

ZEDA COMPUTERS INTERNATIONAL, LTD.
ZEDA 580
Desktop
Word Length: 8-bit
Operating System: ZEDOS
Languages Supported: Cobol, Fortran, Basic, Pascal, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: OEM
Purchase Price: $5,000 to $8,000
Date First Installed: June 1979
Number Installed to Date: 1,000

ZENDEX CORP.
MODEL 95/35
Micro
Word Length: 8-bit
Operating System: CP/M 86, ISIS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $6,995 to $18,000
Maintenance: Return to manufacturing facility
Date First Installed: March 1981

Number Installed to Date: 125
(See Vendor Profile Page V-22)

ZENDEX CORP.
MODEL 95/36
Micro
Specific Application: Process Control
Word Length: 18-bit
Operating System: CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 160M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $9,210 to $24,000
Maintenance: Return to manufacturing facility
Date First Installed: June 1981
Number Installed to Date: 12

ZENDEX CORP.
MODEL 95/36 UDI
Micro
Word Length: 18-bit
Operating System: CP/M 86
Languages Supported: Cobol; Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 1M bytes
Multiple Users: No
Maximum On-Line Storage: 20M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $8,741 to $10,250
Maintenance: Return to manufacturing facility
Date First Installed: March 1982
Number Installed to Date: 15

ZENDEX CORP.
MODEL 95/86 RMX
Micro
Specific Application: Process Control
Word Length: 18-bit
Operating System: RMX
Languages Supported: Fortran; Pascal, C
Minimum Memory: 512K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 160M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $1,995 to $29,000
Maintenance: Return to manufacturing facility
Date First Installed: January 1982
Number Installed to Date: 4

ZENDEX CORP.
MODEL 235
Micro
Word Length: 8-bit
Operating System: CP/M 86
Languages Supported: Cobol Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,000
Maintenance: Return to manufacturing facility

ZENDEX CORP.
MODEL 238
Micro
Specific Application: Process Control
Word Length: 16-bit
Operating System: CP/M 86
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 1M bytes
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $7,000
Maintenance: Return to manufacturing facility

ZENITH DATA SYSTEMS
Z89
Desktop
Word Length: 8-bit
Operating System: HDOS
Languages Supported: Cobol Fortran, Basic, Pascal
Minimum Memory: 48K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 11M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,595 to $3,900
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: October 1980
Number Installed to Date: 10,000 — 50,000
(See Vendor Profile Page V-22)

ZENITH DATA SYSTEMS
Z90
Desktop
Word Length: 8-bit
Operating System: CP/M
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 11M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous
Distribution: Third-party
Vendor Sales Terms: Purchase
Purchase Price: $2,895 to $3,900
Maintenance: Return to manufacturing facility, Third-party
Date First Installed: October 1981
Number Installed to Date: 10,000 — 50,000

ZENITH DATA SYSTEMS
Z100
Micro
Word Length: Dual 8/16-bit
Operating System: CP/M, ZDOS

Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 128K bytes
Maximum Memory: 768K bytes
Multiple Users: No
Maximum On-Line Storage: 80M bytes
Maximum I/O Ports: 3
Communications Protocols: Asynchronous, Synchronous
Distribution: Third-party
Purchase Price: $3,200 to $4,100
Maintenance: Third-party
Date First Installed: September 1982
Number Installed to Date: 10,000 — 50,000

ZENTEC CORP.
SERIES 2000
Desktop
Word Length: 16-bit
Operating System: ZENIX
Languages Supported: Cobol, Fortran, Basic, Pascal
Minimum Memory: 256K bytes
Maximum Memory: 1M bytes
Multiple Users: Yes, 6
Maximum On-Line Storage: 60M bytes
Maximum I/O Ports: 2
Communications Protocols: SDLC
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $9,000
Maintenance: On-site
Date First Installed: April 1983
(See Vendor Profile Page V-22)

XILOG, INC.
MCZ-1
Desktop
Word Length: 8-bit
Operating System: ZEUS
Languages Supported: Cobol, Fortran, Basic, Pascal, C, Assembler
Minimum Memory: 64K bytes
Maximum Memory: 64K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $11,000
Maintenance: Third-party
Date First Installed: 1977
Number Installed to Date: 500 — 1,000
(See Vendor Profile Page V-22)

XILOG, INC.
MCZ-2
Desktop
Word Length: 8-bit
Operating System: CP/M, ZEUS
Languages Supported: Cobol, Fortran, Basic, Pascal, APL, PL/1, C
Minimum Memory: 64K bytes
Maximum Memory: 256K bytes
Multiple Users: No
Maximum On-Line Storage: 10M bytes
Maximum I/O Ports: 4
Communications Protocols: Asynchronous, Synchronous, Bisynchronous, X.25
Distribution: OEM
Vendor Sales Terms: Purchase
Purchase Price: $5,000 to $13,000
Maintenance: Third-party

Date First Installed: June 1980
Number Installed to Date: 500 — 1,000

XONIC CORP.
ZONIC 6081
Micro
Word Length: 8-bit
Operating System: CDOS
Languages Supported: Cobol, Fortran, Basic, Pascal, C
Minimum Memory: 128K bytes
Maximum Memory: 128K bytes
Multiple Users: No
Maximum On-Line Storage: 640K bytes
Maximum I/O Ports: 3
Communications Protocols: DMA
Distribution: End user
Vendor Sales Terms: Purchase, Rental, Lease
Purchase Price: $32,000 to $200,000
Maintenance: On-site, Return to manufacturing facility
Date First Installed: 1981
(See Vendor Profile Page V-22)

XYDECO, INC.
ZDM 3200
Micro
Specific Application: Process Control
Word Length: 8-bit
Operating System: Proprietary
Languages Supported: Assembler
Minimum Memory: 8K bytes
Maximum Memory: 64K bytes
Multiple Users: Yes, 4
Maximum I/O Ports: 16
Communications Protocols: Asynchronous
Distribution: End user
Vendor Sales Terms: Purchase
Purchase Price: $10,000 to $50,000
Maintenance: On-site, Remote diagnostics, Return to manufacturing facility
Date First Installed: 1980
Number Installed to Date: 10 — 50
(See Vendor Profile Page V-22)

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Systems Under $5,000

Access Matrix Corp.	ACCESS COMPUTER	$2,495.	D-1
Action Instruments Co., Inc.	BC 2.	$2,000.	D-1
Advanced Digital Products, Inc.	PDQ-3	$2,995.	D-1
	PDQ-23	$3,000.	D-1
Advanced Informatics, Ltd.	INFORMER II	$1,500.	D-1
	INFORMER III	$2,500.	D-1
Advanced Micro Digital Corp.	SUPERQUAD	$2,200.	D-2
	SUPERSLAVE	$2,200.	D-2
	SUPERSYSTEM	$2,300.	D-2
Alcyon, Inc.	A68KPM.	$3,000.	C-1
Alspa Computer, Inc.	ACI-1	$2,000.	D-2
	ACI-2	$3,000.	C-1
Altos Computer Systems, Inc.	ACS 8000 SERIES.	$2,840.	D-2
	ALTOS 580 SERIES	$2,990.	D-2
	ALTOS SERIES 5	$2,990.	D-2
Apple Computer, Inc.	APPLE IIE	$1,395.	D-6
	APPLE III	$2,995.	D-6
	INFORMATION ANALYST	$2,995.	D-6
Applied Digital Data Systems, Inc.	MULTIVISION I	$3,395.	D-6
Applied Systems Corp.	ASC/80	$3,000.	D-6
Archives Inc.	ARCHIVE BUSINESS SYSTEM	$4,500.	D-6
Automatic Terminal Information Systems, Inc.	ATIS 4000	$1,600.	D-7
Aydin Corp.	AYCON 17.	$3,400.	D-7
Azurdata, Inc.	SCORE PAD	$1,500.	D-7
Billings Computer Corp.	BC-600	$1,500.	D-7
	BC-500	$2,500.	D-7
Buck Engineering, Inc.	AA 355.	$1,712.	D-7
California Computer Systems	CALSTAR	$3,995.	C-6
Canon U.S.A., Inc.	AS-100.	$3,000.	D-8
Cardkey Systems	1010.	$1,430.	D-8
	D800	$4,000.	D-8
Casio, Inc.	FX9000P	$2,000.	D-8
	FP 1000/1100	$3,500.	D-8
Challenge Systems, Inc.	CS-1000-B.	$4,860.	C-6
CMC International	SYSTEM 1000 SUPER 5.	$2,995.	D-9
	SYSTEM 1000-2	$2,995.	D-10
	SYSTEM 1000-1	$3,000.	D-10
Colonial Data Services Corp.	SB80	$2,995.	C-5
	SB80/4	$4,400.	D-10
Columbia Data Products, Inc.	1600-1	$2,000.	C-5
	M64	$2,249.	D-10
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	964.	$4,000.	D-10
	1600-2	$4,400.	C-5
	F64	$4,495.	D-10
Commodore Business Machines, Inc.	VIC 20	$299.	D-13
	64.	$595.	D-10
	PET 4032.	$995.	D-12
	PET 8032.	$1,495.	D-12
	SUPER PET	$1,995.	D-12
Compal Computer Systems, Inc.	ELECTRIC BRIEFCASE	$1,995.	D-12
Compaq Computer Corp.	COMPAQ.	$2,995.	D-12
Compucorp.	600 SERIES.	$4,995.	D-13
	700 SERIES.	$4,995.	D-12
Compumotor Corp.	150 SERIES INDEXERS	$500.	D-12
	172 SERIES INDEXERS	$600.	D-12
	2100 SERIES INDEXERS	$795.	D-13
	1600 SERIES INDEXERS	$1,095.	D-13
Computer Automation, Inc.	OS-4 SYSTEMS	$4,500.	C-6
Computer Communications Specialists, Inc.	TASK 1000	$1,995.	D-13
Computer Devices, Inc.	DOT 3000	$2,995.	D-13
Computer Hardware, Inc.	4108.	$1,150.	D-13
	4108A	$1,750.	D-13
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	4111.	$2,295.	D-13
	4121.	$4,495.	D-13
	4131.	$3,995.	D-13
Contemporary Control Systems, Inc.	SYSTEM 8000.	$4,000.	D-13
Convergent Technologies, Inc.	AWS TURBO	$4,500.	D-13
Corona Data Systems, Inc.	CORONA PORTABLE PPC1	$2,395.	D-14
	CORONA PC-1	$2,595.	D-14
	CORONA PORTABLE PPC2	$2,795.	D-14
	CORONA PC-2	$2,995.	D-14
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Cosmos Systems, Inc.	LYRA	$1,650.	D-14
Cromemco, Inc.	CS-O	$1,295.	D-16

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	CS-OD	*$2,995.*	*D-19*
	CS1	*$3 995.*	*D-15*
	CS-2	*$4,695.*	*D-15*
	CS1D2	*$4,995.*	*D-15*
CWI Terminal Corp.	1503	*$2,000.*	*D-18*
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Cybersystems, Inc.	DAC-5000	*$2,500.*	*D-17*
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Datamac Computer Systems	800 SERIES	*$2,000.*	*D-17*
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	ASSOCIATE +15	*$4,500.*	*D-19*
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Datavue Corp.	80-200	*$2 795.*	*D-18*
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	FAC-PAC	*$1,700.*	*D-19*
Davidge Corp.	DSB-4/6	*$995.*	*D-18*
Digidyne Corp.	S832	*$3 500.*	*C-8*
Digilog, Inc.	DIGILOG 1000	*$3 995.*	*D-19*
Digital Equipment Corp.	RAINBOW 100	*$2,675.*	*D-19*
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Digital Technology International	DTI 587P-88	*$4,000.*	*D-20*
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	DIRECT 1025	*$3,950.*	*D-20*
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Dual Systems Corp.	83/00	*$4,440.*	*D-21*
Eagle Computer, Inc.	EAGLE II	*$2,995.*	*D-22*
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Epic Computer Products, Inc.	EPISODE 1148	*$1,324.*	*D-23*
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	QX-10	*$2,495.*	*D-23*
	QX-10 CP/M	*$2,495.*	*D-23*
EXO Systems Corp.	AVALANCHE	*$595.*	*D-23*
	AVALANCHE PLUS	*$795.*	*D-23*
	AVALANCHE PLUS 2	*$1,795.*	*D-23*
	SYSTEM 501	*$2,495.*	*D-24*
	SYSTEM 502	*$2,495.*	*D-24*
	SYSTEM 503	*$2,495.*	*D-24*
	SYSTEM 801	*$3,795.*	*D-24*
	SYSTEM 802	*$3,795.*	*D-24*
	SYSTEM 810	*$3,795.*	*D-24*
	SYSTEM 820	*$3,795.*	*D-24*
	SYSTEM 840	*$3,795.*	*D-24*
EZ Data, Inc.	EZ-GRADUATE	*$3,450.*	*D-24*
Facit, Inc.	DTC	*$3,295.*	*D-24*
Franklin Computer Corp.	ACE 1000	*$1,500.*	*D-25*
	ACE 1200	*$2,200.*	*D-25*
Friends Amis, Inc.	PORTABRAIN	*$995.*	*D-25*
Fujitsu Microelectronics, Inc.	MICRO 16S	*$4,000.*	*D-25*
Gimix, Inc.	GIMIX	*$4,000.*	*D-26*

GMR, Inc.	SM-1	$3,250.	D-26
Golden West Computers	999 SERIES.	$4,500.	D-26
Griffin Technology, Inc.	VALDINE SERIES/33.	$4,000.	D-26
Hardy Computer Corp.	801.	$1,350.	D-26
	256.	$1,500.	C-10
	8001.	$2,000.	D-36
Heath Co.	Z100 LOW PROFILE	$4,000.	D-26
	Z100 SERIES.	$4,099.	D-26
Heurikon Corp.	HK68000 SYSTEM	$3,590.	D-28
Hewlett-Packard Co.	HP 125 SERIES.	$3,000.	C-11
	HP 86.	$3,800.	D-28
	HP SERIES 200	$4,000.	D-26
IBM	PERSONAL COMPUTER.	$1,600.	D-36
IMS International	5000IS (ZILOG)	$3,600.	D-29
	5000SX (ZILOG)	$3,600.	D-29
	5000SX (INTEL)	$3,660.	D-28
	5000IS (INTEL)	$4,200.	D-28
	8000SX (ZILOG)	$4,900.	D-29
Intelligent Systems Corp.	INTECOLOR 3650	$2,900.	D-30
	INTECOLOR 8050	$3,800.	D-30
Inter City Papers, Ltd.	PC-1.	$1,500.	D-31
International Entry Systems, Inc.	DATA CORDER 1	$1,995.	D-31
	6000.	$3,400.	D-31
Intersil Systems, Inc.	INFORMATION PROCESSOR.	$4,500.	D-31
Intertec Data Systems	SUPERBRAIN	$1,995.	D-31
	COMPUSTAR	$2,500.	D-31
Jones, Ltd.	JONAS 2100	$3,995.	D-31
LNW Research Corp.	LNW80.	$1,695.	D-32
	LNW80 II	$1,995.	D-32
Lobo Drives International	MAX-80	$1,750.	C-13
Mad Computer, Inc.	MAD-1	$4,225.	D-32
Management Assistance, Inc.	S/10.	$4,000.	D-32
Martec International	IBEX 9000	$2,500.	D-33
Megadata Corp.	SERIES 8000.	$2,000.	D-33
Mepcom International, Inc.	TIGER II	$4,200.	D-32
Micro Source, Inc.	M6000P.	$3,900.	D-33
Micro Technology Unlimited	MTU-130	$3,350.	D-33
	MTU-132	$3,350.	D-34
Midwest Scientific Instruments, Inc.	MSI-6800	$2,000.	C-16
Mitsubishi Electronics America, Inc.	MITSUBISHI 816	$3,000.	D-34
Morrow Designs, Inc.	MICRO DECISION.	$1,195.	C-17
Mostek Corp.	MATRIX-80/SDT	$1,300.	D-35
	MATRIX/200	$4,995.	D-36
Mullen Computer Products	STD 991	$2 695.	D-35
Multi-Tech Systems, Inc.	MT 500	$4,795.	D-36
Mueys Corp.	SR/1.	$4,000.	D-36
	ST/1.	$4,000.	D-36
National Micro Products, Inc.	NMP 128K.	$3 000.	C-17
NCR Corp.	DECISION MATE V	$2 800.	D-36
NEC Information Systems, Inc.	PC 8000.	$1,000.	D-36
	APC	$3,298.	D-36
	ASTRA 200	$4,500.	D-36
NNC Electronics	80.	$3,200.	D-36
Non Linear Systems, Inc.	KAYPRO II	$1,795.	D-36
	KAYPRO 10.	$2,795.	D-36
Northern Telecom, Inc.	503.	$4,795.	D-36
Northstar Computers, Inc.	ADVANTAGE.	$3,598.	D-37
	ADVANTAGE 8/16.	$3,598.	D-37
	HORIZON	$3,599.	D-37
	HORIZON MULTIUSER	$3,599.	D-37
Observational Systems, Inc.	OS-3	$2,500.	D-37
Olympia U.S.A., Inc.	PORTABLE COMPUTER.	$380.	D-36
Omnidata	OMNI III	$3,500.	D-36
Osborne Computer Corp.	OSBORNE I.	$1,795.	D-36
OSM Computer Corp.	ZEUS 4	$4 600.	D-36
Otrona Corp.	ATTACHE	$3,995.	D-36
Oxbridge, Inc.	MODEL 16.	$2,000.	D-36
Panasonic Industrial Co.	JR200	$349.	D-36
	THE LINK HHC	$700.	D-36
Pegasus Data	PEGASUS CONQUEROR	$990.	C-18
	PEGASUS 1A.	$2,100.	C-18
Personal Micro Computers, Inc.	PMC-80	$875.	D-36
	PMC-81	$875.	D-36
	ELEC EPS-80	$1,900.	D-36
	MICRO MATE	$2,000.	D-36
Phase Information Machines Corp.	P9002	$3,195.	D-40
Point Four Data Corp.	P9010	$4,740.	D-40
	MARK 1	$2,000.	C-20

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Point Four Data Corp.	MARK 3	$3,000	C-20
Polymorphic Systems	8810	$3,595	D-40
	8810/2	$4,439	D-40
Product Associates, Inc.	Z-DISK	$2,995	D-41
Pronto Computers, Inc.	PRONTO 16/10	$2,995	D-41
	PRONTO 16/20	$3,750	D-41
	PRONTO 16/110	$4,995	D-41
Quasar Co.	HK-2500	$329	D-42
	HK-2600	$379	D-42
	HK2608	$479	D-42
QDP Computer Systems	QDP-200	$2,995	D-42
	QDP-300	$3,995	D-42
	QDP-100	$4,695	D-42
Quay Corp.	500	$2,500	D-42
	520	$3,000	D-42
	540	$3,600	D-42
	900	$4,995	D-43
	900/33	$4,995	D-43
	S50	$4,995	D-43
Quest Electronics	SUPER ELF	$106	D-43
Radian Corp.	MP3	$4,100	D-43
Radix Corp.	UTILICORDER	$3,000	D-42
Raster Graphics, Inc.	RG-802	$4,000	D-42
Reynolds & Reynolds Co.	TC 1000	$4,000	D-44
Sage Computer Technology	SAGE 2	$3,600	D-44
Sanyo Business Systems Corp.	MBC 1000	$1,995	D-44
	MBC 2000	$3,495	D-44
	MBC 3000	$4,995	D-44
Scientific Micro Systems, Inc.	MDX-80	$3,800	D-44
SCI Systems, Inc.	VENUS 1000	$3,800	C-22
Seal & Company, Inc.	840-XX	$1,500	D-45
Seaqua Computer Corp.	CHAMELEON	$1,995	D-43
	CHAMELEON PLUS	$2,895	D-43
Sentinel Energy Control Systems, Inc.	MC-8	$1,000	C-23
	MC-16	$1,000	C-23
	MICRO 4	$1,000	C-23
Sharp Electronics Corp.	PC1500	$200	D-44
Sierra National Corp.	SIERRA 3000	$2,490	D-45
Smoke Signal Broadcasting	CHIEFTAIN 90	$2 200	D-44
	CHIEFTAIN	$3,000	D-43
	CHIEFTAIN 98W60	$3,200	D-43
	CHIEFTAIN 9512	$3,500	D-43
	CHIEFTAIN 9522	$3 900	D-43
	CHIEFTAIN 9524	$4,300	D-43
	CHIEFTAIN 9812	$4,525	D-43
	CHIEFTAIN 9822	$4,900	D-43
Sony Communications Products Co.	SMC-70	$1 470	D-47
Southwest Technical Products, Inc.	S/09	$1,835	D-47
	S+	$4,250	D-43
Stearn Computer Systems	STEARN 3501 DESKTOP	$3,800	D-47
Syscon International, Inc.	SYSCON INT'L	$1,000	D-47
Tandy Corp.	TRS-80 COLOR	$299	D-48
	TRS-80/III	$700	D-48
	TRS-80/II	$3,450	D-43
	TRS-80/12	$3,450	D-43
	TRS-80/16	$4,999	D-43
Tarbell Electronics	EMPIRE I	$4,661	D-48
TBM, Inc.	GENNI	$3,500	D-43
Technico, Inc.	TSC16	$700	D-49
	TMF-16	$4,390	D-43
Teamar, Inc.	TEC 86	$4,390	D-49
Telcon Industries, Inc.	ZORBA	$1,985	D-50
	NOMIS 9	$2,395	D-50
	NOMIS 12	$2,485	D-50
	MAIL/COMP	$3,795	D-50
	CASH/COMP	$3,995	C-24
Telectronic, Inc.	SUM	$2,500	D-50
	TEL-100	$3,500	D-50
Teleram Communications Corp.	TELERAM 3000/1	$2,995	D-50
	TELERAM 3000/2	$3,595	D-50
TeleVideo Systems, Inc.	TELETOTE I	$1,499	D-50
	TS800	$1,800	D-50
	TS802	$3,495	D-50
	TS1603H	$4,495	D-51
Texas Instruments, Inc.	99/4A	$450	D-51
	TI PROFESSIONAL	$2,595	D-51
3 R Computers, Inc.	AVATAR TC1	$1,795	D-51
	AVATAR TC3278	$1,995	D-51

3 R Computers, Inc.	AVATAR TC100	$2,195	D-51
	AVATAR TC10	$2,295	D-51
	AVATAR TC110	$4,795	D-51
Timex Computer Corp.	SINCLAIR/1000	$50	D-51
Torch Computers Ltd.	CF110F	$4,995	C-28
Toshiba America, Inc.	T-100	$795	D-52
	T-200	$2,995	D-52
	T-250/4	$3,995	D-52
Triformation Systems, Inc.	MICRO BRAILLE 2400	$4,850	D-52
Vector Graphic, Inc.	1600	$3,995	D-54
	4/20	$4,750	D-52
Victor Technologies, Inc.	SERIES 9000-912000	$4,995	C-28
Wang Laboratories, Inc.	2200 MVP	$4,300	C-27
	2200 SVP	$4,500	C-27
Wave Mate, Inc.	BULLET	$1,995	D-55
	SERIES 2000	$2,995	D-55
Wintek Corp.	SPRINT 68	$3,649	C-28
Xerox Corp.	820-II	$2,595	D-55
	16/8	$3,395	C-28
Xycom, Inc.	RACPAC-8	$4,900	D-55
Zeda Computers International, Ltd.	ZEDA 520	$3,000	D-55
Zendex Corp.	MODEL 95/86 RMX	$1,995	D-56
Zenith Data Systems	Z89	$2,595	D-56
	Z90	$2,895	D-56
	Z100	$3,200	D-56
Zobex	S-11	$4,000	C-29

$5,000 to $10,000 Systems

Action Computer Enterprise	DISCOVERY 500	$6,590	D-1
Actu Systems	CPU 3000	$7,875	D-1
Advanced Micro Devices, Inc.	PS-1000	$8,000	D-1
Advanced Micro Digital Corp.	SUPERSTAR	$6,000	D-2
Alpha Micro Systems	AM-1000	$9,600	C-1
Altos Computer Systems, Inc.	586 SERIES	$7,990	D-2
Analog Devices	MACSYM-150	$6,500	C-1
	MACSYM-350	$6,500	C-1
Andromeda Systems, Inc.	11/M	$5,000	D-4
	11/B	$7,500	D-4
Apple Computer, Inc.	LISA	$9,995	D-5
Applied Digital Data Systems, Inc.	MULTIVISION 8-5	$6,900	C-2
	8-15	$8,195	C-1
	MULTIVISION II	$8,200	C-1
Applied Systems Corp.	ASC/86	$5,000	D-5
Applied Technology Ventures, Inc.	4900	$6,000	D-5
	FOX II B80/B100/B160	$7,500	D-5
Astronautics Corp. of America	INTELLIGENT TERMINAL	$9,000	D-6
Aydin Corp.	5217 PCT	$6,000	D-7
Barreto & Associates, Inc.	MICRO MASTER	$9,500	D-7
Barrington International Corp.	E'LITE	$8,000	D-7
Breogan Corp.	8400 SERIES	$8,100	B-1
Budget Computer Systems, Inc.	MICRO PLUS 8D	$5,000	C-2
	MICRO PLUS 8T	$5,000	C-2
Burr Brown Research Corp.	CS430	$9,000	D-6
Burroughs Corp.	B20 SERIES	$8,000	C-2
	B90 SERIES	$8,350	C-3
Bytronix Corp.	SERIES 1000A	$5,710	C-3
	SERIES B 500	$6,070	C-4
	B550	$6,490	C-3
	MICRON 600	$6,500	C-3
	SERIES 4000	$8,570	C-3
California Computer Systems	MODEL 2310	$5,000	C-4
	SYSTEM 300	$5,000	C-4
	SYSTEM 400	$7,000	C-4
	SLIM-LINE 3000	$9,995	C-4
Callan Data Systems	UNISTAR 100	$8,950	D-8
Cardkey Systems	D1000	$5,000	D-8
	D1200	$6,000	D-8
	D1500	$8,500	D-8
Central Data Corp.	C-2000	$6,500	C-4
Century Computer Corp.	VANGUARD 8000	$5,000	C-4
Challenge Systems, Inc.	CS-1000-E	$5,500	C-4
Chromatics, Inc.	CG SERIES	$6,000	D-9
CitiC International	SUPERNET 5	$6,995	D-9
Codata Systems Corp.	3300	$7,800	D-10
Codex Corp.	CDX-268/21	$8,995	D-10

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Codex Corp.	CDX-268/24	$8,000	D-10
Columbia Data Products, Inc.	1600-3	$5,000	C-5
	DC-1000	$7,000	C-5
Comark Corp.	DISKTOR M-4	$7,000	D-10
Compal Computer Systems, Inc.	EZTYPE	$5,695	D-12
CompuPro Corp.	816/C	$8,995	C-5
	816/B	$9,665	D-13
Computer Automation, Inc.	OMNIX	$5,000	C-5
	UNIX SERIES 5	$7,995	C-8
Convergent Technologies, Inc.	IWS	$8,000	D-13
Corvus Systems, Inc.	CONCEPT WS I	$5,000	D-14
	CORVUS CONCEPT	$5,000	D-14
	CONCEPT WS II	$6,000	D-14
	CORVUS CONCEPT +	$6,995	D-14
CRC Systems, Inc.	CR7	$5,000	D-14
Cromemco, Inc.	CS2D2	$5,995	D-19
	CS2D5E	$6,495	D-19
	CSID5E	$6,495	D-19
	CS-1H	$6,995	D-19
	CS3	$6,995	D-15
	CS3D2	$7,995	D-19
	CS2H	$8,495	D-19
	CSIHD2	$8,495	D-15
	CS1HD2	$9,495	D-15
	CS1HD5E	$9,495	D-15
	CS3H	$9,495	D-19
	CS3D5E	$9,995	D-19
CWI Terminal Corp.	1505	$8,000	D-19
	1507	$7,500	D-19
Cybersystems, Inc.	CYKEY 9980	$7,000	D-17
	CYKEY 9990	$7,300	D-17
Data General Corp.	MPT/100	$5,000	D-17
	CS/5	$6,000	D-17
	ECLIPSE S/20	$7,000	C-7
	ENTERPRISE 1000	$7,000	D-17
	CS100	$9,000	C-6
Data General Corp	ECLIPSE S/120	$9,000	C-7
	MPT/100	$5,000	D-17
	1800	$8,000	D-19
	6000	$8,500	D-19
Dataram Corp.	M-23	$9,400	C-7
Data Tools International, Inc.	M/8	$9,000	D-19
Datricon Corp.	DV-9	$6,500	D-19
Delta Products, Inc.	DELTA 1	$5,000	D-19
	DP/NET	$7,000	D-19
	DELTA 2	$8,000	D-19
Digidyne Corp.	S864	$6,000	C-8
	S200/5	$6,125	C-8
	S200/11	$7,225	C-8
Digilog, Inc.	DIGILOG 1500	$8,795	D-19
	DIGILOG 1800	$9,795	D-19
Digital Technology International	DTI 582A-888	$8,000	D-20
Digitan Systems, Inc.	DE/2000	$5,200	D-20
	DE/3000	$9,000	D-20
D & N Micro Products, Inc.	MICRO 80	$5,000	C-8
Durango Systems, Inc.	POPPY	$5,000	C-8
	800 SERIES	$7,450	D-21
	700 SERIES	$9,950	D-21
	900 SERIES	$9,950	D-21
Dynabyte	5605	$8,000	D-21
	5710	$8,995	D-21
	MONARCH 6900	$9,000	C-8
Eagle Computer, Inc.	1600 SERIES	$6,995	D-21
	EAGLE IV	$6,995	D-22
ECS Microsystems, Inc.	ECS 4500	$5,000	D-22
Essex Engineering Co.	SX-1107	$9,000	D-22
ETR Star Systems	STAR-SYSTEM 1	$5,900	C-8
	STAR-SYSTEM 2	$7,900	C-8
Euclid Computer, Inc.	EUCLID E1	$8,995	D-23
EXO Systems Corp.	SYSTEM 581	$6,495	D-24
	SYSTEM 582	$6,495	D-24
	SYSTEM 583	$6,495	D-24
EZ Data, Inc.	EZ-300	$7,000	D-24
Fortune Systems Corp.	32:16	$5,000	D-25
Franchise Mailing Systems	3410	$8,000	D-25
General Robotics Corp.	SCORPIO	$7,000	C-10
	GEMINI SERIES	$8,000	C-10
	TRISTAR SERIES	$9,000	C-10
Grid Systems Corp.	COMPASS	$8,150	C-10

Harris Corp.	9015	$9,300	C-10
Hartronix, Inc.	4S32	$8,000	C-10
	4S32A	$8,000	D-28
Hewlett-Packard Co.	HP 87	$5,900	D-28
	HP 85A	$6,500	D-28
	HP 1000L SERIES	$8,000	C-11
	HP 83A	$8,400	D-28
	MODEL 5 MICROSYSTEM	$9,800	C-11
IBM	XT	$5,000	D-28
ICL, Inc.	DRS20	$7,000	C-12
IMS International	8000S (ZILOG)	$6,000	D-29
	8000S (INTEL)	$6,900	D-29
Independent Business Systems, Inc.	BETA SYSTEM 2	$5,250	C-12
Indep, Inc.	APOGEE I	$8,500	D-29
	APOGEE II	$9,500	C-12
Infotech, Inc.	CC2/16	$6,000	C-13
Integrated Business Computers, Inc.(IBC)	MIDI-CADET	$7,495	D-29
Integrated Digital Products	MINI MATE	$5,000	C-13
Intelligent Systems Corp.	INTECOLOR 8350	$5,000	D-30
	INTECOLOR 8360	$7,000	D-30
Inter-Care Systems, Inc.	7200	$8,000	D-30
Interail Systems, Inc.	ISB 80/85	$5,500	D-31
Ithaca Intersystems, Inc.	ITHACA 525/600	$7,000	D-31
Ithaco, Inc.	COMPUDAS	$7,000	D-31
Jonos, Ltd.	JONAS 2500	$5,995	D-31
Lanier Business Products, Inc.	COMPUTER EZE	$6,500	D-32
Logical Business Machines	DAVID	$5,500	D-32
	TINA	$9,985	C-13
Martec International	IBEX 7500	$6,000	D-33
Measurement Systems & Controls, Inc.	SYSTEM 2900	$7,000	D-32
Micromation, Inc.	MI SYSTEM	$7,000	C-16
Micro Source, Inc.	M6000P-H	$8,395	D-33
	M6000P-H/C	$7,395	D-32
Micro Technology Unlimited	MTU-131D	$5,600	D-33
Mohawk Data Sciences Corp.	SERIES 21 21/10	$7,035	D-34
	SERIES 21 21/20	$7,900	D-34
	SERIES 21 21/40	$7,900	D-34
Monolithic Systems Corp.	MSC-8801	$6,250	D-38
	MSC-8702	$6,900	D-39
	MSC-8800 SERIES	$7,000	D-35
	MSC-8802	$7,000	D-39
	MSC-8805	$8,000	D-35
Morrow Designs, Inc.	DECISION 1	$5,000	C-17
New England Digital Corp.	ABLE SERIES 40	$6,500	C-17
	ABLE SERIES 60	$7,500	C-17
Niagara Scientific, Inc.	DATKON 700 SERIES	$7,000	D-39
NNC Electronics	80W	$5,395	D-39
	53	$8,200	D-36
Novell Data Management, Inc.	SHARENET	$8,995	D-37
Oakleaf, Inc.	DPU	$5,900	D-37
	SX-350	$8,500	D-37
Octagon Computer Systems	OCTAGON 8/16	$5,000	C-19
Onyx Systems, Inc.	C5001A	$5,990	D-38
	SUNDANCE	$6,350	D-38
	SYSTEM 2000	$7,250	D-38
	SUNDANCE II	$8,550	D-38
	C5001/MU	$6,850	D-38
OSM Computer Corp.	ZEUS 3	$8,000	C-18
Oxbridge, Inc.	MODEL 32	$5,000	D-39
Perkin-Elmer Corp.	MODEL 7500	$8,400	D-39
Portec Computer Corp.	PCC 2000	$9,995	D-40
Phoenix Digital Corp.	DP SERIES 60	$5,000	D-40
	DP SERIES 80	$5,000	D-40
	SERIES 1000	$8,000	D-40
Point Four Data Corp.	MARK 5	$5,000	C-20
	MARK 8	$6,000	C-20
Polymorphic Systems	8813	$5,595	D-40
	TWIN SYSTEMS	$9,995	D-41
Pro-Log Corp.	ABL1-101	$5,335	D-41
	ABL1-102	$5,335	D-41
	ABL1-151	$5,335	D-41
	ABL1-152	$5,335	D-41
	ABL1-252	$5,335	D-41
	ABL1-201	$6,295	D-41
	ABL1-202	$6,295	D-41
PSITech	GTM 809	$7,500	D-42
	TM 1609	$8,000	D-40
	GB 2020	$9,500	D-40
	GTC 1609	$9,500	D-42

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Quay Corp.	910	$7,995	D-43
Rair Microcomputer Corp.	BLACK BOX 3/20S	$6,500	D-43
R2E of America, Inc.	9050	$5,500	D-44
Sage Computer Technology	SAGE 4	$6,800	D-44
Scientific Data Systems, Inc.	SDS 400 SERIES	$5,500	D-46
	SDS 4000	$8,400	D-46
Scientific Micro Systems, Inc.	DSX-80	$5,400	D-46
	MDX-11	$6,000	D-44
Seattle Computer	GAZELLE	$5,995	D-45
Sibthorp Systems, Inc.	SPT-100	$7,500	D-46
	CTL-100	$9,000	D-46
Sierra National Corp.	SIERRA 5000	$5,990	D-45
	SIERRA 4000	$6,000	D-45
Smoke Signal Broadcasting	CHIEFTAIN 95W4	$7,100	D-46
	CHIEFTAIN 95W15	$8,200	D-46
	CHIEFTAIN 95YW15	$8,500	D-45
	CHIEFTAIN 98W15	$9,600	D-46
Southern Computer Systems, Inc.	SCS-8000	$7,000	D-47
	SCS-9000	$7,000	C-23
Technico, Inc.	TI 32	$7,000	C-24
Tecmar, Inc.	TEC 86MA	$7,595	D-48
	TEC LAB I	$7,645	D-49
	TEC VI	$7,645	D-49
Tektronix, Inc.	4112A	$5,500	D-49
	4051	$6,295	D-49
	4052A	$9,900	D-49
TeleVideo Systems, Inc.	TS802H	$6,995	D-51
Texas Instruments, Inc.	BS SYSTEM 300	$9,995	C-24
Torch Computers, Ltd.	CF110	$7,995	C-26
	CF110HD	$8,995	C-20
Toshiba America, Inc.	EW-100/2	$5,495	D-52
	EW-100/4	$6,495	D-52
	T-250/5	$6,995	C-20
Vector Graphic, Inc.	3005	$5,495	D-54
	3100	$5,795	D-54
	4/30	$5,995	D-54
	5005/E	$7,350	D-54
	5010/E	$8,150	D-56
	3105	$8,495	D-54
Victor Technologies, Inc.	SERIES 9000-914000	$5,745	C-26
	SERIES 9000-913000	$6,995	C-26
Wang Laboratories, Inc.	PCSIII	$5,000	C-27
	2200 MVPC	$8,000	C-27
	2200 LVP	$8,500	C-20
	2200 LVPC	$9,000	C-20
Western Digital Corp.	SB1600	$7,000	D-55
Western Telecomputing Corp.	ICS 850	$6,500	D-55
Wicat Systems, Inc.	SYSTEM 150	$8,500	D-55
Xycom, Inc.	RACPAC-12	$5,900	D-55
Zax Corp.	THE BOX	$5,995	D-55
	THE BOX II	$7,995	D-55
	THE BOX III	$7,995	D-55
Zeda Computers International, Ltd.	ZEDA 580	$5,000	D-55
Zendex Corp.	MODEL 235	$7,000	D-55
	MODEL 238	$7,000	D-56
	MODEL 95/38 UDI	$6,741	D-55
	MODEL 95/35	$6,995	D-55
	MODEL 95/36	$9,210	D-55
Zentec Corp.	SERIES 2000	$9,000	D-56
Zilog, Inc.	MCZ-1	$5,000	D-56
	MCZ-2	$5,000	D-55

$10,000 to $20,000 Systems

Action Computer Enterprise	DISCOVERY 1600	$10,000	D-1
Acurex Corp.	AUTODATA TEN/50	$18,000	D-1
Adac Corp.	BGSYS	$10,000	D-1
	PROSYS I	$10,000	D-1
Advanced Micro Devices, Inc.	RTE 16	$19,000	D-2
Altos Computer Systems, Inc.	ACS 8600 SERIES	$12,500	D-2
	ACS 68000	$14,500	D-2
AMF Logic Sciences, Inc.	HSR 11-B	$14,500	D-2
AM International, Inc.	COMP EDIT 5310	$17,995	D-4
	COMP/EDIT 5410	$19,995	D-4
Analog Devices	MACSYM-2	$12,000	C-1
	MACSYM-10	$12,000	C-1

Andromeda Systems, Inc.	11/H	$10,000	D-4
Apollo Computer, Inc.	DN300 DOMAIN PROCESSOR	$15,000	B-1
Applied Digital Data Systems, Inc.	MULTIVISION III	$10,700	C-1
Applied Technology Ventures, Inc.	J300	$12,000	D-5
	J600	$12,000	D-5
	J600	$12 000	D-5
Ardent Computer Products, Inc.	ARDENT 20	$10,000	C-2
	ARDENT 40	$14,000	C-2
Aydin Corp.	AYCON 15	$11,000	D-7
	AYCON 16	$14,000	D-7
Burr Brown Research Corp.	CS450	$10,000	D-5
	CS460	$12,000	D-5
Burroughs Corp.	B96	$10,000	C-2
	B93	$10,108	C-2
Bytronix Corp.	SERIES 5000	$11,785	C-4
Cado Systems Corp.	CAT III	$10,000	D-8
	SYSTEM 20/24	$16,000	D-8
Callan Data Systems	UNISTAR 200	$13,950	D-5
Cardkey Systems	D2000	$16,500	D-9
Central Data Corp.	COMPAT/123	$13,000	D-9
	COMPAT/23	$15,000	D-5
Centurion Computer Corp.	MICRO PLUS SERIES	$15,000	C-4
Charles River Data Systems, Inc.	UNIVERSE 68	$11,000	B-1
Codex Corp.	CDX-268/44	$12 995	D-10
Compal Computer Systems, Inc.	8200	$10,000	D-12
Compugraphic Corp.	MCS	$13,000	D-12
Computer Automation, Inc.	DATACASE/5	$13,675	C-5
Comtek, Inc.	COMTEK CD-4	$17,000	C-6
Convergent Technologies, Inc.	IWS GRAPHICS	$10,000	D-13
	AWS COLOR GRAPHIC	$11,000	D-13
Cromemco, Inc.	CS3HD2	$10,495	D-19
	CS2HD5E	$10,995	D-18
	CS3HD5E	$12,495	D-18
	Z2HGS	$12,995	D-18
Data General Corp.	CS200A	$13,000	C-6
	ENTERPRISE 3000	$14,000	D-17
	ECLIPSE S/130	$16,000	C-7
Data Media Corp.	932	$15,000	C-7
Dataram Corp.	W-23	$12,750	C-7
Delta Products, Inc.	DELTA 4	$10,000	D-19
Digicomp Research Corp.	DELPHI-100	$15,000	D-19
Digital Equipment Corp.	MICRO PDP11	$10,000	C-8
Digital Pathways, Inc.	DEFENDER	$15,000	D-20
Docutel Olivetti Corp.	S-6000	$16,000	C-9
Dual Systems Corp.	83/20	$19,660	D-21
Durango Systems, Inc.	POPPY II	$12,000	C-9
Dynabyte	MONARCH 6600	$10,995	C-9
E & H Electronics	EH-6100	$10,000	D-22
Elite Corp.	CONSULTANT	$17,900	C-9
Estimation, Inc.	CONTRACTOR I	$10,000	D-23
Florida Computer Graphics	BEACON	$18,000	D-24
Forward Technology, Inc.	MODEL 3000	$14,000	D-25
	MODEL 500	$19,000	D-25
Franchise Mailing Systems	3440	$12,000	D-25
General Automation, Inc.	ZEBRA 1000	$18,950	D-25
General Robotics Corp.	PEGASUS	$10,000	C-16
Gould, Inc.	3227	$14,000	B-3
	3227 QUADRA BYTE	$14,000	B-3
Harris Corp.	9020	$16,000	C-19
Hewlett-Packard Co.	HP 1000A SERIES	$12,000	C-11
	HP 1000E SERIES	$12,000	C-11
	9835	$13,000	D-26
	HP 1000F SERIES	$15,000	C-11
IBM	SYSTEM/23 DATAMASTER	$10,000	D-26
Indep, Inc.	APOGEE III	$12,495	C-12
Inforex, Inc.	INFOREX 1303	$16,900	C-13
	INFOREX 3150	$18,900	C-13
Infotecs, Inc.	CC2	$11,000	C-13
Innotronics Corp.	SERIES 6000	$11,000	D-29
Instrumentation Laboratory, Inc.	PIXEL 100/AP	$12,825	D-30
Interactive Systems Technology, Inc.	IST-86	$13,000	C-13
Inter-Care Systems, Inc.	7300	$10,000	D-30
	8200	$11,500	D-30
	7400	$14,000	D-30
	8400	$14,500	D-30
	8300	$15,500	D-30
	7500	$19,000	D-30
	8500	$19 000	D-30
Kentron Electronics	2300	$17,000	D-31

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Laboratory Technologies Corp.	LAB TECH 70	$15,000	D-32
Logical Business Machines	GOLIATH	$19,170	D-32
Management Assistance, Inc.	S80 SERIES	$14,000	D-32
Micromation, Inc.	MARINER	$13,000	C-16
	M/SYSTEM	$13,000	C-16
Micro V Corp.	SERIES 3000	$15,500	D-34
Mohawk Data Sciences Corp.	SERIES'21 21/50	$10,000	D-34
Molecular Computer	SUPERMICRO 8	$10,700	D-34
	SUPERMICRO 32	$16,700	D-34
Momentum Computer Systems International	HAWK 32/4	$10,000	D-35
	MOMENTUM 32/4	$10,000	D-35
	HAWK 32	$11,000	D-35
	MOMENTUM 32	$12,000	D-35
	MOMENTUM 32E	$13,500	D-35
	HAWK 32/E	$14,000	D-35
NCR Corp.	I-9010	$10,000	C-17
	TOWER 1632	$14,000	C-17
NEC Information Systems, Inc.	ASTRA 210	$11,800	C-17
Nixdorf Computer Corp.	8860 MODEL 5	$16,000	C-16
Oakleaf, Inc.	MP-16	$10,900	D-37
Onyx Systems, Inc.	C8001/MU	$11,490	D-38
	C5002A	$11,990	D-38
	SYSTEM 3000	$12,250	D-38
	C8002A	$13,990	D-38
	SUNDANCE 16	$13,990	D-38
	SYSTEM 4000	$15,000	D-38
	C8002	$17,000	C-16
OSM Computer Corp.	ZEUS 2	$15,000	C-16
PCE Systems	PCE SYSTEMS	$10,000	D-39
Perkin-Elmer Corp.	3200 MPS	$15,000	B-6
PMC, Inc.	OPT-RM	$11,000	D-40
Plexus Computers, Inc.	PLEXUS P/25	$14,950	C-20
	PLEXUS P/35	$17,950	C-20
Polaris Microcomputers, Inc.	MICROSCRIPT	$15,000	D-40
Prodigy Systems, Inc.	PRODIGY 1	$10,000	C-20
	PRODIGY 2	$12,000	C-20
Qantel Corp.	SYSTEM 10	$14,000	C-21
Q1 Corp.	Q1-68000	$13,000	C-21
	Q1-68000 DESKTOP	$13,000	D-43
	Q1/LITE	$15,000	C-21
	Q1/LMC	$15,000	C-21
	Q1/MICROLITE	$15,000	C-21
Radian Corp.	UT-3	$14,250	D-43
Rexon Business Machines Corp.	RX100	$13,000	C-22
	RX400	$19,000	C-22
Reynolds & Reynolds Co.	VIM NET	$17,000	D-44
Scientific Micro Systems, Inc.	DSX-11	$10,000	D-44
SCI Systems, Inc.	MERCURY 2	$12,000	C-22
	MERCURY 3	$12,000	C-22
Sentinel Computer Corp.	SENTINEL SERIES 10	$13,000	C-23
Smoke Signal Broadcasting	CHIEFTAIN 9W15T20	$11,100	D-45
	CHIEFTAIN 9W10T20	$11,200	D-46
	CHIEFTAIN 98W30	$11,400	D-46
	CHIEFTAIN 95W15T20	$11,500	D-45
	CHIEFTAIN 95YW15T20	$11,700	D-45
	CHIEFTAIN 9W80	$11,800	D-45
	CHIEFTAIN 9W30T20	$12,900	D-45
	CHIEFTAIN 9W80T200	$14,200	D-46
	CHIEFTAIN 98W60T20	$15,400	D-46
Spectra Systems, Inc.	SPECTRA 123	$12,000	D-47
Sperry Corp.	BC7	$13,000	C-24
Sun Microsystems, Inc.	SUN WORKSTATION 100	$12,900	D-47
	SUN WORKSTATION 150	$16,900	D-47
Tecmar, Inc.	TEC 86W	$10,990	D-49
	TEC 86M4W	$12,990	D-49
Tektronix, Inc.	4054A	$14,950	D-48
	4113A	$16,500	D-50
	4114A	$17,900	D-50
Telectronic, Inc.	MUM	$10,000	D-50
Telegenix, Inc.	SOS-V31	$11,000	C-24
TeleVideo Systems, Inc.	TS816/40	$13,000	C-24
	TS806/20	$17,000	D-51
Texas Instruments, Inc.	DS990/2	$14,000	C-24
	DS990/3	$16,500	C-24
Unicomp Corp.	PIXEL 80	$14,800	C-26
	PIXEL 100 AP	$19,000	D-52
	PIXEL 80G	$19,900	C-26
Vector Graphic, Inc.	5032/E	$11,950	D-54
	3032	$12,795	D-54

Victory Computer Systems, Inc.	FACTOR 68/1	$14,000	D-54
	VICTORY SPIRIT	$14,000	D-54
Zero One Computer Corp.	ZERO ONE 100	$10,000	C-28
Zilog, Inc.	8000	$15,000	C-28
Zydeco, Inc.	ZDM 3200	$10,000	D-56

$20,000 to $50,000 Systems

Accelerated Data Systems	100	$20,000	B-1
	200	$25 000	B-1
	300	$35 000	B-1
Actu Systems	POS 15	$35,000	D-1
Advanced Micro Devices, Inc.	AMSYS 29/10A	$26,000	D-1
Alpha Micro Systems	AM-1022	$21,000	C-1
	AM-1042	$26,000	C-1
	AM-1062	$32,000	C-1
Amtel Systems Corp.	MESSENGER II LEVEL 1	$20 000	D-4
	MESSENGER II LEVEL 2	$30,000	D-4
Androtek/DMI	RIGEL II	$20,000	D-5
Apollo Computer, Inc.	DN420 DOMAIN PROCESSOR	$30,000	B-1
	DN400 DOMAIN PROCESSOR	$40,000	B-1
Applied Digital Data Systems, Inc.	MENTOR 3000 SERIES	$24,900	B-1
	4000 SERIES	$39,000	B-1
Applied Technology Ventures, Inc.	EPICURE 8000	$25,000	C-2
	MODEL 250/XX	$40,000	C-2
Autech Corp.	DACMASTER 6000	$32,000	D-6
Automatic Control Electronics	80 EC	$30,000	D-6
	80 EC FM	$30,000	D-6
	80 EC FM-II	$30,000	D-6
	80 EC-II	$30,000	D-6
	80/90	$30,000	D-7
Braegen Corp.	8000 SERIES	$21,000	A-2
BTI Computer Systems, Inc.	BTI 5000	$38,000	C-2
Bunker Ramo Information Systems	BR1600	$40,000	C-2
Cadlinc, Inc.	CIM STATION	$25,000	D-8
Cade Systems Corp.	SYSTEM 20/28	$30,000	D-8
Cardkey Systems	D4000	$49,500	D-8
Centurion Computer Corp.	SERIES 5300	$20,000	C-4
	SERIES 5200	$21,000	C-4
	SERIES 6000	$24,000	C-4
	CENTURION 6500	$36,722	D-8
	CENTURION 6400	$39 442	D-9
Century Computer Corp.	CC200	$22,000	C-4
Compugraphic Corp.	ONE/110	$45,000	B-1
Computer Automation, Inc.	CARTOS SERIES 5	$20,000	C-5
Computer Consoles, Inc.	POWER 5/20	$28,000	C-6
Computer Designed Systems, Inc.	ADVISOR 100	$30,000	C-6
	ADVISOR 300	$40,000	C-6
Comtek, Inc.	CM-2	$23,000	C-6
CRC Systems, Inc.	CR80	$25,000	C-6
	CR801	$25,000	C-6
Cromemco, Inc.	CS3D40E	$27,495	D-15
	CS3HD40E	$29,995	D-16
Delay Systems Corp.	LOGICIAN D	$35,000	D-17
Data General Corp.	ECLIPSE S/140	$20,000	C-7
	CS200B	$28,000	C-6
	ECLIPSE MV/4000	$28,000	B-2
	ECLIPSE S/250	$40,000	C-7
Datapoint Corp.	8600	$24,000	C-7
	6600	$28,000	C-7
Digital Equipment Corp.	PDP 11/23 PLUS	$21,000	C-8
	PDP 11/24	$32,000	C-8
	VAX 11/730	$49,000	B-2
Digital Systems Corp.	GALAXY/3	$28,000	C-6
	GALAXY/5	$40,000	C-6
Display Data Corp.	INSIGHT 80	$45,000	C-9
	INSIGHT 8000	$45,000	C-9
Floating Point Systems, Inc.	FPS-100	$40,500	A-4
General Automation, Inc.	ZEBRA 1500	$21,000	D-26
	ZEBRA 2000	$23,000	D-26
	ZEBRA 2500	$26,000	D-26
	ZEBRA 3000	$30,000	D-26
	ZEBRA 3500	$38,000	D-26
Hewlett-Packard Co.	HP 250 SERIES	$20,000	C-11
	9845	$28,000	D-26
	HP 300	$37,000	C-11

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Honeywell, Inc.	DPS 6/31	$20,000	C-12
	6/32	$26,000	C-11
	6/38	$26,000	C-12
	6/34	$30,000	C-11
	6/48	$32,000	C-12
	6/54	$39,000	C-12
IBM	SYSTEM/34	$20,000	C-12
	8130	$30,000	C-12
	8140	$30,000	C-12
	SERIES/1	$30,000	C-12
	SYSTEM/36	$40,000	C-12
ICL, Inc.	SYSTEM 25	$35,000	C-12
Incomnet, Inc.	LOTUS BASIC	$20,000	B-4
	LOTUS EXECUTIVE	$20,000	B-4
Inforex, Inc.	INFOREX 3200	$27,650	C-13
	SYSTEM 9000	$40,000	C-13
	INFOREX 3300	$42,000	C-13
Intel Corp.	IDIS 86/735	$34,995	D-29
	IDIS 86/445	$35,000	C-13
Intellimac, Inc.	IN/7000K SERIES	$22,000	D-30
	IN/7000M	$47,500	D-30
Logical Business Machines	ADAM	$22,000	D-32
Management Assistance, Inc.	SYSTEM 110/210	$20,000	D-32
Microdata Corp.	REALITY	$26,000	C-16
Mikros Systems Corp.	MKS 16/D	$26,550	D-34
	MKS 1750/D	$32,000	D-34
Mini-Computer Systems, Inc.	MICOS 100	$20,000	C-16
	MICOS 300	$25,000	C-16
Modular Computer Systems, Inc.	CLASSIC II/25	$28,800	C-16
	CLASSIC II/45	$43,200	C-16
Molecular Computer	SUPERMICRO 32X	$21,000	D-35
	SUPERMICRO 64X	$25,000	D-35
Mylex Digital Sciences, Inc.	3000 SERIES	$36,000	C-17
NCR Corp.	I-9020	$20,000	C-17
	NCR 9300	$25,000	A-11
NEC Information Systems, Inc.	ASTRA 250	$21,900	C-17
	ASTRA 270	$27,000	C-17
Nicolet Instrument Corp.	PATHFINDER 2	$40,000	C-17
Nixdorf Computer Corp.	8845	$30,000	C-18
	8860 MODEL 10	$32,500	C-18
	8860 MODEL 40	$39,500	C-18
Norsk Data North American, Inc.	ND100	$33,000	C-18
Northern Telecom, Inc.	585	$46,900	D-37
Nuclear Data, Inc.	680	$30,000	C-18
	6700	$45,000	C-19
Onyx Systems, Inc.	SYSTEM 5000	$32,300	D-38
Parallel Computers, Inc.	CPU16/100	$25,000	C-16
	CPU16/200	$25,000	C-16
Perkin-Elmer Corp.	3210	$25,000	B-6
	3210/A	$42,000	B-6
Plexus Computers, Inc.	PLEXUS P/40	$37,950	C-20
	PLEXUS P/60	$42,950	C-20
Prime Computer, Inc.	PRIME 2250	$39,900	B-8
Prolink Corp.	PROLINK	$25,000	D-41
Prophet 21	PROPHET 21 MODEL 3	$48,000	D-41
Qantel Corp.	SYSTEM 20	$23,000	C-21
Radian Corp.	UT-2	$24,200	D-41
	UT-1	$37,885	C-21
Reynolds & Reynolds Co.	EXPANSION 6000	$36,000	C-22
Second Source Computers, Inc.	SSCI-100	$30,000	C-22
Sentinel Computer Corp.	SENTINEL-30	$25,000	C-22
	SENTINEL-40	$33,000	C-22
	SENTINEL-50	$42,000	C-23
	SENTINEL-80	$46,000	C-23
Sperry Corp.	V77-XXX SERIES	$29,000	C-24
	1900/10 SYSTEM	$31,404	C-23
Syscom International	SYSCOM 3200	$28,500	B-8
Telefile Computer Products, Inc.	TELEPAC	$32,000	D-50
Texas Instruments, Inc.	600 SERIES	$22,500	C-25
	DS990/4	$26,000	C-25
	DS990/5	$29,000	C-25
	DS990/7	$34,000	C-25
	DS990/9	$39,000	C-25
Three Rivers Computer Corp.	PERQ	$24,000	C-26
TPC, Inc.	NH1000 SERIES	$25,000	D-52
Vicom Systems, Inc.	VICOM	$35,000	C-26
Wang Laboratories, Inc.	2200 VS50	$33,000	C-27
	2200 VS80	$33,000	C-27
Wicat Systems, Inc.	SYSTEM 200	$25,000	C-26

Zonic Corp.	ZONIC 6081	*$32,000.*	*D-56*
	ZONIC 6085	*$32,000.*	*C-26*

$50,000 to $100,000 Systems

Accelerated Data Systems	400	*$60,000.*	*B-1*
AMF Logic Sciences, Inc.	OPS 11	*$70,000.*	*C-1*
Apollo Computer, Inc.	DN600	*$60,000.*	*B-1*
Applied Digital Data Systems, Inc.	5000 SERIES	*$65,000.*	*B-1*
Aydin Corp.	AYCAD	*$75,000.*	*D-7*
BBN Computer Corp.	C/60	*$50,000.*	*C-2*
	C/70	*$83,000.*	*C-2*
Bunker Ramo Information Systems	BR1720	*$85,000.*	*D-7*
Burroughs Corp.	B1905	*$62,475.*	*C-2*
	B1910	*$91,350.*	*C-2*
Cado Systems Corp.	TIGER ATS-64	*$50,000.*	*D-8*
Cambex Corp.	1636 SERIES	*$95,000.*	*A-2*
Cardkey Systems	PASS	*$70,000.*	*D-8*
Communication Manufacturing Co.	4000	*$75,000.*	*A-3*
Compugraphic Corp.	ONE/116	*$60,000.*	*B-2*
	ONE/132	*$75,000.*	*B-2*
Computer Designed Systems, Inc.	ADVISOR 600	*$60,000.*	*C-6*
Computer Talk, Inc.	MODEL 400	*$56,000.*	*B-2*
Cosmos Systems, Inc.	ORION	*$50,000.*	*D-14*
Daisy Systems, Corp.	LOGICIAN	*$75,000.*	*D-17*
Data General Corp.	ECLIPSE MV/6000	*$75,000.*	*B-2*
Datapoint Corp.	8800	*$67,000.*	*C-7*
Datawest Corp.	460	*$60,000.*	*A-3*
Digital Equipment Corp.	PDP 11/44	*$55,000.*	*C-6*
	VAX 11/750	*$85,000.*	*B-2*
Floating Point Systems, Inc.	AP-120B	*$60,000.*	*A-4*
	AP-180V	*$93,500.*	*A-4*
Formation, Inc.	F4000/100	*$71,500.*	*B-2*
	F4000/101	*$71,500.*	*B-2*
Four-Phase Systems, Inc.	SYSTEM IV/40	*$62,000.*	*C-9*
	SYSTEM IV/50	*$95,000.*	*C-9*
General Automation, Inc.	ZEBRA 5000	*$57,000.*	*C-10*
	ZEBRA 5500	*$59,000.*	*D-26*
Gould, Inc.	32-2750	*$68,000.*	*B-3*
Harris Corp.	HARRIS 700	*$55,000.*	*B-3*
	HARRIS 300	*$80,000.*	*B-3*
Hewlett-Packard Co.	HP 3000 SERIES 40SX	*$50,000.*	*C-11*
	HP 3000 III	*$60,000.*	*C-11*
	HP 3000 SERIES 40	*$85,000.*	*C-11*
Honeywell, Inc.	6/74	*$65,000.*	*C-12*
	6/76	*$75,000.*	*C-12*
	DPS 7/35	*$94,000.*	*B-6*
IBM	SYSTEM/38-3	*$60,000.*	*A-6*
	SYSTEM/38-4	*$65,000.*	*A-7*
Incomnet, Inc.	LOTUS ADVANCED	*$50,000.*	*B-4*
Inforex, Inc.	INFOREX 5000	*$75,000.*	*C-12*
Intelligent Systems Corp.	INTECOLOR 8060	*$60,000.*	*D-30*
Magnuson Computer Systems, Inc.	M80/30	*$94,000.*	*A-8*
Mega/Net Corp.	MEGA/NET 1000	*$68,000.*	*B-6*
Modular Computer Systems, Inc.	CLASSIC II/75	*$97,200.*	*B-6*
Paradyne Corp.	8400	*$67,000.*	*C-19*
Peripheonics Corp.	VOICE PAC	*$50,000.*	*C-19*
	TCOMM	*$90,000.*	*C-19*
Perkin-Elmer Corp.	3230	*$70,000.*	*B-6*
Prime Computer, Inc.	PRIME 250-II	*$78,000.*	*B-6*
Qantel Corp.	SYSTEM 40	*$55,000.*	*C-21*
Radian Corp.	UT-4	*$50,000.*	*C-21*
Raytheon Co.	RDS 550	*$60,000.*	*C-21*
	RDS 500	*$70,000.*	*C-21*
	RDS 7500 RAYNET I	*$80,000.*	*C-21*
	RDS 7500 RAYNET II	*$80,000.*	*C-21*
	RDS 7500 RAYNET III	*$80,000.*	*C-21*
	RDS 7500 RAYNET IV	*$90,000.*	*C-22*
Ridge Computers	RIDGE THIRTY-TWO	*$65,000.*	*B-6*
Sperry Corp.	90/30 SYSTEM	*$52,728.*	*C-23*
	SYSTEM 80 MODELS 3 & 5	*$59,261.*	*C-24*
	SYSTEM 80 MODELS 4 & 6	*$66,082.*	*C-24*
Tandem Computer, Inc.	NON STOP	*$95,000.*	*B-6*
Taylor Instrument Co.	MOD3103	*$60,000.*	*C-24*
Teleflo Computer Products, Inc.	TCP16	*$65,000.*	*C-24*
Telegenix, Inc.	MTDS	*$80,000.*	*C-24*

Teradata, Inc.	SMART	$75,000	D-51
Texas Instruments, Inc.	DS990/16	$50,000	C-25
	800 SERIES	$51,000	C-26
	DS990/26	$70,000	C-26
	DS990/36	$87,000	C-26
TRW-Fujitsu Corp.	FUJITSU 8500	$65,000	C-26
Wang Laboratories, Inc.	VS90	$73,000	C-27
Wicat Systems, Inc.	SYSTEM 300	$75,000	C-28

$100,000 to $250,000 Systems

Amnet, Inc.	NUCLEUS 6000	$100,000	D-4
Applied Dynamics International	AD SYSTEM 10	$200,000	D-5
August Systems, Inc.	PCS 300	$125,000	D-5
	CDAS 300	$130,000	D-6
Auragen Systems Corp.	AURAGEN 4000	$138,000	B-1
BTI Computer Systems, Inc.	BTI 8000	$105,000	B-1
Burroughs Corp.	B1913	$122 750	C-3
	B1955	$130 000	C-3
	B1985	$156 400	C-3
	B2930	$199,500	A-3
Cambex Corp.	1640 SERIES	$150,000	A-2
Compugraphic Corp.	ONE/180	$100,000	B-2
Computer Consoles, Inc.	POWER 5/55	$202,000	B-2
Computer Designed Systems, Inc.	ADVISOR 900	$100,000	C-9
Control Data Corp.	CYBER 170/815	$195,000	A-3
Daisy Systems Corp.	GATEMASTER	$100,000	D-17
Data General Corp.	ECLIPSE MV/8000	$185,000	B-2
Datawest Corp.	470	$200,000	A-3
Digital Equipment Corp.	DEC SYSTEM 2020	$170,000	A-4
	VAX 11/780	$190,000	B-3
Floating Point Systems, Inc.	AP-190L	$168 000	A-4
	FPS 164	$226,000	A-4
Formation, Inc.	F4000/200	$100,000	B-3
	F4000/201	$100,000	B-3
	F4000/300	$120,000	B-3
	F4000/301	$120,000	B-3
Four-Phase Systems, Inc.	SYSTEM IV/60	$110,000	C-9
	SYSTEM IV/65	$130,000	C-10
	SYSTEM IV/70	$150,000	C-10
	SYSTEM IV/90	$166,000	B-3
	SYSTEM IV/80	$217,000	B-3
	SYSTEM 700	$218,000	B-3
	SYSTEM IV/95	$242,000	B-3
Gould, Inc.	3277	$100 000	C-10
	FACTORY CONTROLLER	$100 000	D-26
	327780	$150,000	B-3
	3287	$200,000	C-10
Harris Corp.	HARRIS 800	$150,000	B-4
Hewlett-Packard Co.	HP 3000 SERIES 44	$110,000	C-11
	HP 3000 SERIES 64	$165 000	B-4
Honeywell, Inc.	6/92	$110,000	B-4
	6/96	$130 000	B-4
	DPS 7/45	$130,000	B-4
	DPS 8/20	$150,000	A-4
	DPS 8/20C	$150 000	A-4
	DPS 8/44	$198,000	A-4
	DPS 7/55	$200,000	B-4
	DPS 8/44C	$200,000	A-4
IBM	4321	$100,000	B-4
	4331-1	$120,000	A-6
	4331-11	$130 000	A-6
	4331-2	$150,000	A-6
Informatek Status, Inc.	SIMIS III	$100,000	A-7
	SIMIS IV	$150,000	A-7
	SIMIS V	$150,000	A-7
IPL Systems, Inc.	4436	$135,000	A-7
	4443	$180,000	A-7
	4445	$206,000	A-7
Lexar Corp.	LEXORITER SERIES 3	$219,500	D-32
Magnuson Computer Systems, Inc.	M80/32	$114,000	A-8
	M80/31	$150,000	A-8
	M80/41	$196,000	A-8
Management Assistance, Inc.	SYSTEM 810	$125,000	D-33
Mega/Net Corp.	MEGA/NET 2000	$220,000	B-5
Microdata Corp.	SEQUEL	$140,000	C-18

Mini-Computer Systems, Inc.	MICOS 350	$175,000	C-16
National Advanced Systems, Inc.	AS/1100	$160,000	A-9
NCR Corp.	I-9040	$100,000	A-10
	I-9050	$136,000	A-10
	V-8535 II	$220,000	A-11
Nixdorf Computer Corp.	8890 MODEL 30	$120,000	A-11
	8890 MODEL 50	$175,000	A-12
Nydon Systems	11/70M	$130,000	C-18
Paradyne Corp.	RESPONSE	$120,900	A-12
Perkin-Elmer Corp.	3250	$140,000	B-8
Prime Computer, Inc.	PRIME 450-II	$112,000	B-8
	PRIME 550-II	$112,000	B-8
	PRIME 750	$213,000	B-8
Pyramid Technology Corp.	PYRAMID COMPUTER	$100,000	B-8
Qantel Corp.	SYSTEM 64	$150,000	C-21
Stratus Computer, Inc.	STRATUS 32	$120,000	B-8
Tandem Computer, Inc.	NON STOP II	$165,000	B-8
Taylor Instrument Co.	MOD3106	$150,000	C-24
Teleflo Computer Products, Inc.	T85	$235,000	A-12
Wang Laboratories, Inc.	2200 VS 100	$100,000	C-27

$250,000 to $500,000 Systems

AKI, Inc.	4000	$250,000	C-1
	ATEX 8000	$250,000	C-1
Burroughs Corp.	B3955	$304,500	A-2
	B6930	$462,000	A-2
Cambox Corp.	1651 SERIES	$350,000	A-3
Control Data Corp.	CYBER 170/825	$370,000	A-3
Digital Equipment Corp.	VAX 11/782	$400,000	B-2
	DEC SYSTEM 2040	$483,000	A-4
Gavilan Computer Corp.	GAVILAN	$399,500	D-25
Gould, Inc.	32/8780	$330,000	C-10
Honeywell, Inc.	DPS 7/65	$250,000	B-4
	DPS 8/50C	$285,000	A-5
	DPS 8/44D	$350,000	A-5
	DPS 8/52	$450,000	A-5
	DPS 8/52C	$450,000	A-5
IBM	4341-10	$250,000	A-6
	SYSTEM/38-5	$290,000	A-7
	4341-1	$300,000	A-6
	SYSTEM/38-7	$380,000	A-7
	4341-11	$450,000	A-6
Ikon Industries Data Systems, Inc.	9000	$250,000	B-4
IPL Systems, Inc.	4446	$282,000	A-7
	4460	$295,000	A-6
Magnuson Computer Systems, Inc.	M80/42	$324,000	A-6
	M80/43	$384,000	A-6
Nanodata Computer Corp.	QM-1	$400,000	A-8
National Advanced Systems, Inc.	AS/3000N	$325,000	A-9
	AS/3000	$470,000	A-9
NCR Corp.	V-8545 II	$315,000	A-11
	V-8555 II	$400,000	A-11
	V-8565 II	$440,000	A-11
Nixdorf Computer Corp.	8890 MODEL 70	$300,000	A-12
Prime Computer, Inc.	PRIME 850	$356,000	B-8
Sperry Corp.	90/60 SYSTEM	$284,000	C-23
	1100/60	$336,519	A-12
Synapse Computer Corp.	SYNAPSE +1	$360,000	A-12
Taylor Instrument Co.	MOD3606	$270,000	C-24
Teleflo Computer Products, Inc.	T90	$450,000	A-12

$500,000 to $1,000,000 Systems

Burroughs Corp.	B5900 SERIES	$750,000	A-2
	B4955	$780,000	A-2
Control Data Corp.	CYBER 170/835	$820,000	A-3
Datawest Corp.	480	$500,000	A-4
Digital Equipment Corp.	DEC SYSTEM 2060	$557,000	A-4
	DEC SYSTEM 1091	$585,000	A-4
	DEC SYSTEM 1080	$794,000	A-4
Honeywell, Inc.	DPS 8/62	$660,000	A-5
	DPS 8/62C	$660,000	A-5

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IBM	3033N	$500,000	A-5
	4341-2	$600,000	A-5
	4341-12	$700,000	A-5
IPL Systems, Inc.	4480	$547,000	A-5
Mega/Net Corp.	MEGA/NET 3000	$500,000	B-6
Modutect Systems, Inc.	MARK 9	$700,000	A-5
National Advanced Systems, Inc.	AS/5000	$575,000	A-10
NCR Corp.	V-8575 II	$514,000	A-11
	V-8585 II	$549,000	A-11
	V-8595 II	$690,000	A-11
	V-8635	$750,000	A-11
Sperry Corp.	90/80 SYSTEM	$798,250	C-23

$1,000,000 to $5,000,000 Systems

Amdahl Corp.	470V/7 & V/8 SERIES	$2,515,000	A-5
	580 MODEL 5850	$2,750,000	A-2
	580 MODEL 5860	$3,950,000	A-2
Burroughs Corp.	B7803	$1,013,251	A-2
	B7830	$1,785,000	A-2
	B7900 (F H K) SERIES	$2,500,000	A-2
	B7850	$3,150,000	A-2
Control Data Corp.	CYBER 170/855	$1,935,000	A-3
	CYBER 170/865	$2,465,000	A-3
	CYBER 170/875	$3,230,000	A-3
Cray Research, Inc.	CRAY 1/M SERIES	$4,000,000	A-3
Denelcor, Inc.	H-1000	$1,600,000	A-4
Honeywell, Inc.	DPS 8/70	$1,200,000	A-5
	DPS 8/70C	$1,200,000	A-5
	DPS 8/70M	$1,300,000	A-5
	DPS 88	$3,000,000	A-5
IBM	3031	$2,000,000	A-5
	3033S	$3,000,000	A-5
National Advanced Systems, Inc.	AS/6130	$1,095,000	A-10
	AS/7000N	$1,100,000	A-10
	AS/6150	$1,180,000	A-10
	AS/8040	$1,300,000	A-10
	AS/7000	$1,640,000	A-10
	AS/8050	$1,800,000	A-10
	AS/9040	$2,000,000	A-10
	AS/7000 DPC	$2,400,000	A-10
	AS/8060	$2,400,000	A-10
	AS/9050	$2,800,000	A-10
	AS/9060	$3,500,000	A-10
	AS/9070	$4,000,000	A-10
NCR Corp.	V-8645	$1,000,000	A-11
Sperry Corp.	1100/80 SERIES	$1,389,828	A-12
	1100/90 SERIES	$2,869,000	A-12

Systems Over $5,000,000

Amdahl Corp.	580-5870/5880	$5,400,000	A-2
Control Data Corp.	CYBER 205/600 SERIES	$5,000,000	A-3
	CYBER 176	$5,057,060	A-3
	CYBER 203	$5,800,000	A-5
	CYBER 205	$5,900,000	A-3
Cray Research, Inc.	CRAY X-MP	$11,000,000	A-2
IBM	3033A	$6,800,000	A-5
	3033M	$6,800,000	A-5
	3033U	$6,880,000	A-5
	3081K	$7,000,000	A-5
	3081D	$7,100,000	A-5
National Advanced Systems, Inc.	AS/9080	$5,200,000	A-10

ASSOCIATIONS

ALABAMA

Alabama Council For Computer Education
Contact: Alabama Council For Computer Education
P.O. Box 6105
Dothan, AL 36302
(205) 793-6609

INFORM
Open to: Information Science, Inc. Maintenance Department users
Contact: Mr. Gene Schebler
Arizona Public Services
P.O. Box 21666
Phoenix, AZ 85036
(201) 391-1600

System34/38 Users Group
Contact: Marshall Akins
P.O. Box 11484
Birmingham, AL 35202
(201) 780-1111

ARIZONA

CMG — Computer Measurement Group
Contact: CMG
P.O. Box 26063
Phoenix, AZ 85068
(602) 995-0905

IBM System/34, System/38 Users Group
Contact: Miles S. Edwards
15043 N. 54th St.
Scottsdale, AZ 85254
(602) 996-0662 or 934-3401

SW99ers
Open to: Users of Texas Instruments, Inc.'s TI99/4 computers
Contact: Dennis Bergeron
802 S. Pantano Road
Tucson, AZ 85710
(602) 885-8882

CALIFORNIA

Association for Computer Operations Managers
Contact: AFCOM
935 S. Gilbert St.
Anaheim, CA 92804
(714) 761-3551

ADCOM — Association of Data Center Owners and Managers
Contact: ADCOM
650 S. Eastern Ave.
Los Angeles, CA 90022
(714) 549-9345

Association for Computing Machinery — Golden Gate Chapter
Contact: Golden Gate — ACM
P.O. Box 26044
San Francisco, CA 94126
(415) 428-5257

Association of C.A.R. Software Users
Contact: Association of C.A.R. Software Users
525 S. Virgil St.
Los Angeles, CA 90020
(213) 739-8262

Association of Calma Users
Contact: Association of Calma Users
c/o Liz Frank
2901 Tasman Drive
Santa Clara, CA 95050
(408) 970-1668

Association of Schedulers And Planners
Open to: Individuals who use computer systems for scheduling or planning
Contact: Association of Schedulers and Planners
P.O. Box 1178
Reseda, CA 91335
(213) 996-3984

Automation Technology Institute
Contact: Automation Technology Institute
Box 242
Pebble Beach, CA 93953
(408) 624-5892

BAKUP — Bay Area Kaypro Users & Programmers
Contact: Treasurer
BAKUP
Box 20181
Oakland, CA 94620

CP/M & Kaypro Users Group
Open to: Users of Digital Research, Inc. CP/M-based computer systems
Contact: Gerald Sneir
22554 Tiara St.
Woodland Hills, CA 91367
(213) 361-6234

Compatibles
Open to: Prime Computer, Inc. users or vendors
Contact: Mitch Modeleski, President
Pricon, Inc.
30 Roundtree
San Rafael, CA 94903
(415) 479-9734

Coordinators of DP Education
Open to: Users, vendors or trainers involved in DP Education
Contact: Coordinators of DP Education
Suite 605
109 Minna St.
San Francisco, CA 94105-3796
(415) 477-1022

Electric Law Users Group
Open to: Attorneys who are computer users
Contact: Electric Law
36 Malaga Cove Plaza
Palos Verdes, CA 90274
(213) 373-0715

HP 3000 International Users Group, Inc.
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Association Manager
289 S. San Antonio Road
Los Altos, CA 94022
(415) 941-9960

IBM Personal Computer Users Group
Contact: STD Computing Firm
1901 Avenue of the Stars, No. 1774
Los Angeles, CA 90067
(213) 553-8489

Independent Computer Consultants Association
Contact: Mane Petroff
P.O. Box 85152 MB 252
San Diego, CA 92138
(619) 268-4818

Independent Computer Consultants Association of Orange County
Contact: ICCA-OC
P.O. Box 3067
Santa Ana, CA 92703
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Northern California Pick Users
Open to: Users of Pick and Associates, Inc. products
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P.O. Box 6759
Oakland, CA 94603
(415) 632-0977

Northern California Prime User's Group
Open to: Users of Prime systems
Contact: Charles Verboom
P.O. Box 2315
Vallejo, CA 94592
(707) 646-2444

OSI Personal Users Group
Contact: Jim Buternik
5501 Lewis Ave.
Long Beach, CA 90805
(213) 428-0426

Osborne Professional & Educators Network
Open to: Users of Osborne computers
Contact: Frank L. Christ
Learning Assistance Center
CSU Long Beach
Long Beach, CA 90840
(213) 498-4186

Associations

Perfect Software Users Group
Open to: Perfect Software, Inc users
Contact: Perfect Software Users Group
702 Harrison
Berkeley, CA 94710
(415) 527-2626

Qantel Users Group of Southern California
Contact: Michael S. Geller
c/o Remy Leather Fashions
1200 South Los Angeles St
Los Angeles, CA 90015
(213) 537-7700

San Diego Computer Society
Contact: San Diego Computer Society
P.O. Box 81537
San Diego, CA 92138
(619) 442-7967

San Francisco First Osborne Group
Contact: S.F. FOG
c/o Betty Ruellan
436 Madrid St.
San Francisco, CA 94112
(415) 334-2851

Usenix Association
Open to: Licensees of Bell Laboratories, Inc.'s Unix
Contact: Usenix Association
P.O. Box 7
El Cerrito, CA 94530
(415) 528-UNIX

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Association of Computer Users
Contact: Hillel Segal, President
P.O. Box 9003
Boulder, CO 80301
(202) 755-1771

Computer Programmers & US-NS
Open to: Any individual who has a personal interest in minicomputers
Contact: Jim Dudley
Box 774200
Steamboat Springs
CO 80477
(303) 879-0203

Group 34/38
Open to: Those individuals who are actively working on or are involved with IBM's System/34 or System/38
Contact: Group 34/38
P.O. Box 424
Golden, CO 80402
(303) 273-1095

Independent Computer Consultants Association
Open to: Self-employed businessmen or Chief Executive Officers of their own businesses
Contact: Peter Baumer
P.O. Box 9118
Marina del Rey, CA 90291
(213) 838-5214

On-Line Exchange
Open to: Computer dealers and brokers
Contact: On-Line Exchange
3425 Meadowview Drive
Riverside, CA 92503
(714) 689-7408

Original Apple IIIrs
Open to: Apple Computer, Inc users
Contact: Original Apple IIIrs
P.O. Box 813
San Francisco, CA 94101

PACX Users Group
Open to: Users of Gandalf Data, Inc.'s PACX switching system
Contact: Bill Kamm, President
PACX Users Group
Colorado State University
Computer Center
Fort Collins, CO 80523
(312) 541-6060

Precision Visuals Software Users Group
Contact: Karon Kyckelhahn
6260 Lookout Rd
Boulder, CO 80301
(303) 530-9000

CONNECTICUT

Analyzer International Users Group
Open to: Users of Data Devices International, Inc.'s Analyzer System
Contact: TSI International
50 Washington St
Norwalk, CT 06854
(203) 853-2884

Connecticut CP/M Users Group for Businesspeople and Professionals
Contact: Malcolm Roth
62 Burnwood Dr.
Bloomfield, Ct 06002
(203) 243-3063

D.P. Directions
Open to: Atari, Inc. computer owners or users
Contact: O.P. Directions
Box 562
Bloomfield, CT 06002
(203) 659-0492

Data Processing Management Association, Stamford Chapter
Open to: Any person who has at least one year of DP experience
Contact: DPMA — Stamford Chapter
P.O. Box 4120
Stamford, CT 06907

National Association of Computer Stores
Contact: National Association of Computer Stores
196 North St
P.O. Box 1333
Stamford, CT 06904
(203) 323-3143

VS News & World Report
Open to: Any Wang Laboratories, Inc. VS system user
Contact: VS News and World Report
99 River Road
Cos Cob, CT 06807
(203) 629-2880

DISTRICT OF COLUMBIA

Washington DC-IDMS Users Group
Contact: John A. Ambler
DBMS, Inc
Suite 1200
8150 Leesburg Pike
Vienna, VA 22180
(703) 827-0078

Women in Information Processing
Contact: Judy Beckman
Lock Box 39173
Washington, DC 20016
(202) 328-6161

FLORIDA

PRO/34
Open to: All individuals with interest in IBM's small systems
Contact: Joe Britt, Chairman
PRO/34
P.O. Box 8006
Maitland, FL 32751
(800) 432-8315

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Association of the Institute for Certification of Computer Professionals [ICCP]
Open to: Any individual who holds an ICCP certificate
Contact: AICCP
35 E. Wacker Drive
Chicago, IL 60601
(312) 782-9437

Association of Information Managers [AIM] for Financial Institutions
Open to: MIS executives in financial institutions
Contact: M.J. Hoogendyk
AIM Executive Director
Suite 2221

111 East Wacker Drive
Chicago, IL 60601
(312) 644-3100 x773

Association of Management Consultants
Open to: Any individual with at least two years of management consulting experience
Contact: Association of Management Consultants
Suite 1400
500 N. Michigan Ave
Chicago, IL 60611
(312) 266-1261

Central Prime Users Group
Open to: Prime Computer users
Contact: Randall Styka
c/o Computronics
130 N. Ash
Wood Dale, IL 60191
(312) 860-7707

Chicago Chapter, Association of Computing Machinery
Open to: The DP practitioner, teacher or student
Contact: Chicago Chapter, ACM
Attn: Chairman
P.O. Box 2381
Chicago, IL 60690
(312) 269-3183

The Commodore 64 Users Group
Contact: Gus Pagnotta
P.O. Box 572
Glen Ellyn, IL 60137
(312) 794-4320

Disaster Recovery Users Group, Inc.
Open to: Subscribers to Comdisco Recovery Service
Contact: Mr. Ralph Small
DRUG, Inc.
c/o CDRS
6400 Shaefer Court
Rosemont, IL 60018
(213) 583-2171

IBM Systems Users Group
Open to: Users of Systems/3, /32, /34 and /38
Contact: Pat Nordenberg
8004 Cameo Drive
Rockford, IL 61111
(815) 987-2623

Issue, Inc.
Open to: SPSS, Inc. software users
Contact: Issue, Inc.
Suite 1970
444 N. Michigan Ave.
Chicago, IL 60611
(312) 329-2400

Mid-Illinois Apple User Group
Open to: Individuals who are interested in and have the desire to learn about computers
Contact: Charles A. Von Bokel
703 Holiday
Affingham, IL 62401
(217) 342-4342

INDIANA

ASCUE
Open to: Individuals interested in computer educational needs in colleges and schools
Contact: R. Waldo Roth, Chairman
Information Science Dept.
Taylor University
Upland, IN 46989
(317) 998-2751, Ext. 269

Northern Indiana IBM-PC Users Group
Open to: Anyone interested in personal computers
Contact: Northern Indiana IBM-PC Users Group
316 N. Ironwood Drive
Southbend, IN 46615
(219) 289-5506

The Unir Project
Open to: Anyone who is interested in Unix, C and so forth
Contact: Unir
Suite 106
5987 E. 71st St.
Indianapolis, IN 46220
(317) 842-7014

KENTUCKY

Kentucky Regional Users Group
Open to: Hewlett-Packard HP 3000 users
Contact: Cheri Vetter Wilson
c/o NTS Development Co.
10172 Linn Station Road
Louisville, KY 40223
(502) 426-4800

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Open to: Individuals with an artistic interest in digital technology
Contact: Bernard J. Rauch Jr.
P.O. Box 15199
New Orleans, LA 70175
(514) 897-3372

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Open to: Individuals with an interest in on-line searching
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Newsletter Editor, MAINEON
Central Maine Medical
Center Library
Lewiston, ME 04240
(207) 795-2376

MARYLAND

Atari Olney A.C.E.
Open to: Individuals with an interest in Atari systems
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Olney, MD 20832
(301) 774-9405

Construction Computer Application Newsletter
Open to: Construction contractors
Contact: Construction Industry Press
1105-F Spring St.
Silver Spring, MD 20910
(301) 589-4884

MASSACHUSETTS

Association of Data Processing Trainers
Open to: Individuals responsible for the development of DP personnel
Contact: Chris Riopel
Conifer Computer Services
370 Main St.
Worcester, MA 06108
(617) 879-0511 x4712

The Boston Computer Society
Contact: Rosemary O'Neil
3 Center Plaza
Boston, MA 02108
(617) 367-8080

Computer Security Institute
Open to: Individuals interested in computer security
Contact: Carol Smith
Computer Security Institute
43 Boston Post Road
Northborough, MA 01532
(617) 845-5050

Greater Boston Datapoint Users Group
Open to: Users of Datapoint Corp. systems
Contact: Thomas J. LaBerte
50 Pond Park Road
Hingham, MA 02043
(617) 749-9461

NEAR/ACF
Open to: Users of IBM's advanced communications function and

communication software
Contact: Barry Nusbaum
Avco Computer Services
201 Lowell St MS 3123
Wilmington, MA 01887
(617) 729-7700

North American Honeywell Users
Contact: George D. Thompson
Secretary
310 Franklin St
Wrentham, MA 02093
(617) 449-3000 x520

Small Business Service Bureau
Contact: Al Roch
Director
Management Assistance
544 Main St.
Worcester, MA 01601
(800) 262-2981, MA

System 1022/1032 Users Group
Contact: System 1022/1032 Users Group
1105 Massachusetts Ave.
Cambridge, MA 02138
(617) 661-9440

MICHIGAN

Ann Arbor Computer Businesses
Open to: Producers of computer hardware or software in the Ann Arbor area
Contact: M.E. Wilens, Chairperson
313 N. 1st St
Ann Arbor, MI 48103
(313) 665-8778

Hewlett-Packard Users Group
Contact: Systems Analysis
6400 Farmington Road
West Bloomfield, MI 48033
(313) 661-0350

MINNESOTA

North American Computer Exchange
Open to: Users with installed IBM 4331s at their sites
Contact: North American Computer Exchange
P.O. Box 326
Prior Lake, MN 55372
(612) 447-8898

Twin Cities Software Quality Interest Group
Contact: Harlan Seyfer
Sperry, M54752
P.O. Box 43942
St. Paul, MN 55164
(612) 631-5938

MISSISSIPPI

BLISS/COBOL Users Group
Contact: Marshal O'Neil
P.O. Box 12424
Jackson, MS 39211
(601) 649-3400

MISSOURI

Independent Computer Consultants Association
Open to: Firms offering independent computer consulting
Contact: ICCA
P.O. Box 27412
St. Louis, MO 63141
(314) 567-9708

Ksy/500 Users Group
Contact: Sauer Computer Systems, Inc.
1750 South Brentwood
St. Louis, MO 63144
(314) 962-0382

St. Louis Computer Group
Contact: St. Louis Computer Group
5600 Clayton Road
St. Louis, MO 63110
(314) 535-0100

St. Louis Heath Users Group
Contact: SLHUG
c/o 3794 McKelvey Rd.
St. Louis, MO 63044
(314) 291-1850

St. Louis Regional Hewlett-Packard Users Group
Contact: CCSC, Inc
2001 Hanley Center
St. Louis, MO 63144
(314) 647-8891

St. Louis S/38 Users Group
Open to: Users with installed IBM System/38s
Contact: Charles Rickenberg
St. Louis Football Cardinals
200 Stadium Plaza
St. Louis, MO 63102
(314) 421-0777

MONTANA

Institute for Professional Management
Contact: Lance S. Staub
Secretary/Treasurer
800 S. Main St.
Kartspell, MT 59901
(406) 755-5300 x385

NORTH CAROLINA

Charlotte Apple Computer Club
Contact: Dr. Stephen Canipe
President
2301 E. Providence Drive
Matthews, NC 38105
(704) 372-4530

Triangle 34/38
Open to: Users who have an installed IBM System/34 or /38
Contact: Tnangle 34/38
P.O. Box 58783
Raleigh, NC 27658

NEBRASKA

Computers in Business
Open to: Microcomputer owners
Contact: Bob Weber
3510 Ave. M
Kearney, NE 68847
(308) 237-3186 or (308) 236-6665

NEW JERSEY

Northeast Central Regional User Group, Inc.
Open to: Individuals interested in Hewlett-Packard products
Contact: Pete Somers
c/o Cape Data Corp
Cape May, NJ 08204
(215) 564-4133

Management Recruiters of Sussex
Contact: Management Recruiters
276 Route 206
Andover, NJ 07821
(201) 691-2000

Morris County Times Users Group
Contact: Larry Spencer
6 Forest Court
Morris Plains, NJ 07950
(201) 267-5566

Metropolitan Honeywell Users Association
Contact: Honeywell Users
c/o Goodall Rubber Co.
P.O. Box 8237
Trenton, NJ 08650
(609) 587-4000

NEW YORK

Association of Upstate NY Information Centers
Contact: Sandra Maceyka
User Services Manager

First Federal Savings
and Loan
1 First Federal Plaza
Rochester, NY 14614
(716) 454-4010

Buffalo Area On-line Users Group
Open to: Search analysts
Contact: Maryruth Glogowski
SUC/Buffalo
1300 Elmwood Ave
Buffalo, NY 14222
(716) 878-6320

DC/2 Users Group
Contact: Richard Nauer
Mobil Oil Corp.
150 42nd St
New York, NY 10017
(212) 883-5950

DYROS
Open to: Individuals interested in developing e commitment to world workability methods through automation
Contact: Mr. Jack A. Schulman
1160 Midland Ave
Bronxville, NY 10708
(615) 793-6228

FUSE
Open to: Licensees of Information Builders, Inc.'s Focus software
Contact: Information Builders
FUSE Secretary
1250 Broadway
New York, NY 10001
(212) 736-4433

Foothills Apple Users Club
Contact: Brian Clements
Foothills Computer
Quaker Road
Glens Falls, NY 12801
(518) 792-0598

HP 3000 Upstate New York Regional Users Group
Contact: Richard J. Cooman
President
c/o Norwich-Eaton
Pharmaceuticals
P.O. Box 191
Norwich, NY 13815
(716) 334-8080

Long Island Wang Users Group
Open to: Wang 2200 VS users
Contact: Wang Users Group
6800 Jericho Turnpike
Syosset, NY 11572
(516) 364-8700

MDS Library 21
Open to: People who have developed software for use on MDS Series Systems.
Contact: Walter J. Sexton
R.D. 2
Frankfort, NY 13340
(315) 866-5300 x5320

New York IBM Personal Computer Users Group
Contact: Eric A. Jaffe, M.D.
Cornell University Medical College
1300 York Ave
New York, NY 10021
(212) 440-3401

OS Eastern Region Group
Open to: Systems programmers running MVS or VSI systems
Contact: Lucy Adelson
Home Life Insurance Co.
253 Broadway
New York, NY 10007
(212) 306-2185

Starlex Systems and Services, Inc.
Open to: Contract programmers
Contact: Starlex Systems and Services, Inc.
275 Madison Ave
New York, NY 10026
(212) 684-6540

TelTech CICS Users Group
Contact: TelTech
548 5th Ave
New York, NY 10038
(212) 921-0250

Tri-State Information Management Educators
Contact: Kathryn Marsala
1285 Ave. of the Americas
New York, New York 10019
(212) 554-4069

OHIO

Cleveland Sinclair-Timex Users
Contact: R.F. Seg
19502 Thornridge
Cleveland, OH 44135
(216) 261-2211

Mapics Users Group
Open to: All Mapics users
Contact: Woody Herford
1018 Proprietor's Road
Worthington, OH 43085
(614) 846-1839

Northern Ohio Data General Users Association
Contact: John Ferry
15300 Industrial Parkway
Cleveland, OH 44135

Qantel Users Association of Northern Ohio
Contact: Katherine A. Strickland
1382 W. Jackson St.
P.O. Box 110
Painesville, Ohio 44077
(216) 587-3400

Rubber Apple Users Group
Contact: Rubber Apple Users Group
1870 Brookfield Drive
Akron, Ohio
(216) 922-2990

Sierra Data Sciences Users Group
Contact: Sierra Data Sciences
Product Support Division
25700 First St
Westlake, Ohio 44145
(216) 892-1800

The Data Processing Association of Lima, OH
Contact: Charles E. Black
Dresser Industries
Leroi Division
P.O. Box 90
Sidney, OH 45365
(513) 492-1171 x230

4300 Users Group
Open to: Users of IBM 4300 or compatible systems
Contact: Ken Beraduce
RMI Co.
1000 Warren Ave
Niles, OH 44446
(216) 652-9951

OKLAHOMA

Peachtree Enhancement Group
Open to: Users of Peachtree Software, Inc. financial software
Contact: Mini/Micro Software Group
6181 N. May Ave., Suite 21
Oklahoma City, OK 73112
(405) 840-1175

OREGON

Corvallis PC Computer Club
Contact: Barry Shane
P.O. Box 1018
Corvallis, OR 97339
(503) 753-1143

Eugene Kaypro Users Group
Contact: Fred Besse
721 Foothill Drive
Eugene, OR 97405
(503) 344-7202

PENNSYLVANIA

Delaware Valley Computer Users Group
Open to: All computer users and vendors
Contact: Delaware Valley Computer Users Group

P.O. Box 30159
Philadelphia, PA 19103
(215) 698-4000

Delaware Valley IAS LUG
Open to: People interested in Digital Equipment Corp. PDP-11s or IAS equipment
Contact: Robert F. Curley
University of Pennsylvania
P.O. Box 322
Flourtown, PA 19031
(215) 662-3083

Project Management Institute
Contact: Project Management Institute
P.O. Box 43
Drexel Hill, PA 19026
(617) 927-7101

Susquehanna Valley IBM Users Group
Contact: Dennis Archenfelder
3185 Lackawanna
Bloomsburg, PA 17815
(717) 784-2121

TEMPO
Open to: Individuals with DP educational responsibilities
Contact: Ms. Katherine Huston
c/o Smithline Beckman Corp.
Mail Code N39
P.O. Box 7929
Philadelphia, PA 19101
(215) 521-5000 x2059

Valley Apple Medical Group
Open to: Any Apple Computer, Inc. Apple III or IIe owners.
Contact: Dr. Robert England
3237 Paper Mill Road
Huntington Valley, PA 19006
(215) 581-6372

PUERTO RICO

Asociacion de Ususarios
Open to: Any microcomputer, minicomputer or portable computer end users
Contact: Alfredo M. Torney
P.O. Box 11486
San Juan, PR 00910
(809) 728-8694

RHODE ISLAND

Independent RSTS Users
Contact: Joyce Leonard
IRUS Office Manager
Suite 4
3657 Post Road
Warwick, RI 02886
(401) 738-4430

TENNESSEE

East Tennessee HP 1000 Users Group
Contact: Randy Bowling
TVA, 278 401B
Chattanooga, TN 37401
(615) 751-3757

TEXAS

Houston Area Datapoint Users Group
Contact: Virginia Schwartz
HADUG
4990 S.W. Freeway, No. 103
Houston, TX 77027
(713) 759-0059

Midland Microcomputer Association
Contact: Midland Microcomputer Association
P.O. Box 50246
Midland, TX 79710
(915) 697-7012

NEC Users Group
Contact: PC Place, Inc.
11020 Audelia, Suite B101
Dallas, TX 75243
(214) 340-0825

Prime Gulf Coast Users Group
Contact: Bob Rasp
6400 Westpark, Suite 180
Houston, TX 77057
(713) 761-5310

SNA Product Users Group
Open to: Users of IBM's Systems Network Architecture
Contact: SNA Products Users Group
P.O. Box 472832
Garland, TX 75047
(214) 840-2992

Women in Computing
Contact: Sharon Baker
Women in Computing
Suite 185
7501-C West 15th
Plano, TX 75075
(214) 257-0722 — Days
(214) 484-4063 — Evenings

VIRGINIA

Computer Mailing Association
Contact: Computer Mailing and Information Services
P.O. Box 1172
McLean, VA 22101
(703) 827-5949

Systems Planning Corp. Users Group
Contact: Nancy Jenkins
SPC, 1500 Wilson Blvd
Arlington, VA 22209
(703) 841-2975

WISCONSIN

Mapics Users Group — Milwaukee
Contact: Bennet A. Rucka, President
5223 So 49th St.
Greenfield, WI 53220
(414) 423-0680

CALENDAR OF EVENTS
WITH ADVERTISER'S INDEX

Microcomputers in Small Business
September 1, October 1, November 1, December 1
Portland, Ore.
Sponsor: Daniel Moore & Associates
Exhibit contact: S J Kent
Suite 201C
10157 S.W. Barbur
Portland, OR 97219
(503) 245-2102

"Local Networks: Promise into Practice" Seminar
Seminar focusing on criteria for designing and choosing local networks
August 31-September 1 — Phoenix, Ariz.
September 13-14 — San Francisco, Calif.
Registration contact: Architecture Technology Corporation
P.O. Box 24344
Minneapolis, MN 55424
(612) 935-2035

National Conference on Artificial Intelligence
Conference to promote research in the field of artificial intelligence
August 22-26 — Washington, D.C.
Washington Hilton
Sponsoring companies: AAAI, University of Maryland and George Washington University
Registration contact: AAAI
445 Burgess Drive
Menlo Park, CA 94025
(415) 328-3123

Satellite Communications Users Conference
Trade show in satellite communications industry
August 22-24 — St. Louis, Mo.
Stouffer's Riverfront Towers
Sponsor: Satellite Communications Magazine
Exhibit contact: Cheryl R. Carpinello
Satellite Communications Magazine
6430 S. Yosemite St.
Englewood, CO 80111
(303) 694-1522

Technical Career Job Fair
A recruiting trade show for technical corporations
August 22-23 — Phoenix, Ariz.
September 12-13 — San Jose, Calif.
September 19-20 — Dallas, Texas
September 26-27 — Denver, Colo.
October 17-18 — Minneapolis, Minn.
November 14-15 — San Jose, Calif.
November 21-22 — Boston, Mass.
December 5-6 — Los Angeles, Calif.
Sponsor: Business People, Inc.
Exhibit contact: Mike Hall
(800) 328-4032

Worcester Polytechnic Institute's "Executives-Only" Technology Briefing
One day briefing on "The Revolution in Telecommunications Technologies"
August 22 — Worcester, Mass.
August 23 — New York, N.Y.
Sponsor: WPI
Registration contact: Ms. Ginny Bazanan
Office of Continuing Education
Worcester Polytechnic Institute
Worcester, MA 01609
(617) 793-5517

Business Expo
Business-to-business products and services show
August 24-25 — Anaheim, Calif.
September 22-23 — Boston, Mass.
October 5-6 — Oakland, Calif.
November 1-3 — Detroit, Mich.
December 6-8 — Dallas, Texas
Sponsor: International Business Expositions, Inc.
Registration contact: Janice Detweiler
(313) 569-8280
Exhibit contact: Tim Cleary
Suite 702 E.
15565 Northland Drive
Southfield, MI 48075
(313) 569-8280

IBM PC Faire
Conference, exposition, and group meetings focusing on hardware, software and applications for the IBM Personal Computer
August 26-28 — San Francisco, Calif.
Civic Auditorium and Brooks Hall
Exhibit contact: Jim Warren
IBM PC Faire
345 Swett Road
Woodside, CA 94062
(415) 851-7077

Expo Computers 2000
For micro-, mini- and hand-held computers
August 29-September 3 — San Juan, P.R.
Sponsor: Expo 2000 Promotion Agency
Registration contact: Alfredo M. Torney
Exhibit contact: Mrs. Auret Imbert
P.O. Box 11486
San Juan, PR 00910
(809) 728-8694

Society for Information Management Conference
Various seminars focusing on the human dimension of information management
September 12-15 — San Diego, Calif.
Sponsor: Society for Information Management
Exhibit contact: Lynn Valastyan
Society for Information Management
Suite 600
111 East Wacker Drive
Chicago, IL 60601
(312) 644-6610

IEEE Seminar on Software QA
September 12-14 — Atlanta, Ga.
Omni Hotel
October 26-28 — San Francisco, Calif.
Holiday Inn, Fisherman's Wharf
November 30-December 2 — Las Vegas, Nev.
Desert Inn Hotel
Sponsor: Institute of Electrical & Electronics Engineers, Inc.
Registration contact: Susan M. Havranek, Standards Seminar Manager
IEEE
345 East 47th St.
New York NY 10017
(212) 705-7907

MID CON
Minicomputer/Microcomputer Trade Show
September 13-15 — Chicago, Ill.
Sponsor: Topaz
Exhibit contact: Ruxton Tucker
3855 Ruffin Road
San Diego, CA 92123
(619) 571-5622

Computer-Assisted Manual Writing
Documentation development seminar
September 13 — Boston, Mass.
September 15 — Washington, D.C.
Sponsor: PromptDoc, Inc.
833 West Colorado Ave.
Colorado Springs, CO 80905
(303) 471-9875

EUROMICRO 1983 Symposium
Special emphasis on software
September 14-15 — Madrid, Spain
Sponsor: EUROMICRO
P.O. Box 217
Dept. INF
Room A312
7500 AE Enschede, The Netherlands
(31) (53) 338799

Micro Database Software
Data base software demonstration for microcomputers
September 15 — Dayton, Ohio
Sponsor: Data Base Software and Logic
Registration contact: Dave Lu
P.O. Box 53
Dayton, Ohio 45420
(513) 229-8826

Great Southern Computer and Electronics Shows '83
Comprehensive computer and electronics show
September 16-18 — Jacksonville, Fla.
Sponsor: Great Southern Computer and Electronics Shows
Registration contact: Great Southern Computer and Electronics Shows '83
P.O. Box 655
Jacksonville, FL 32201
(904) 353-0418

Information and Technology: At the Crossroads
Conference covering areas of information technology with emphasis on library applications
September 18-21 — Baltimore, Md.

Calendar

Sponsor: Library and Information Technology Association
Registration contact: Don Hammer
LITA Executive Director
50 E. Huron St.
Chicago, IL 60611
(312) 944-6780

Advanced PL/I Programming
September 19-23 — Princeton, N.J.
Nassau Inn
Sponsor: R.A.F. Software, Inc.
Registration contact: Evann Wilcosky
13 Edgehill St.
Princeton, NJ 08540
(609) 683-1823

Data Storage '83
An international forum on critical industry issues and areas of change in data storage equipment and applications
September 20-21 — Santa Clara, Calif.
Sponsor: DISK/TREND, Inc. & Freeman Associates
Registration contact: DataStorage '83
c/o Cartridge & Associates, Inc.
4030 Moorpark Ave., Suite 205
San Jose, CA 95117
(408) 554-6644

Personal Computing for MIS
Stage Based Management Techniques
September 26-30 — Smuggler's Notch, Vt.
Sponsor: Nolan, Norton & Company
Registration contact: Dorothy L. Clarke
Executive Education Programs
One Forbes Road
Lexington, MA 02173
(617) 862-8820

Computer-Assisted Manual Writing
Documentation development seminar
September 27 — Chicago, Ill.
September 29 — Dallas, Texas
Sponsor: PromptDoc, Inc.
833 West Colorado Ave.
Colorado Springs, CO 80905
(303) 471-9875

SIZZLE/East
Seminar/Exposition for information industry and marketers
September 28-29 — Randolph, Mass.
Sponsor: The Sizzle Sheet
Registration contact: Doreen Goldberg
Project Manager
Sizzle Shows
150 Speen St.
Framingham, MA 01701
(617) 875-0013

Hewlett-Packard Eastern American User Conference
September 29-30 — Atlantic City, N.J.
Sponsor: Northeast Central HP Regional Users Group, Inc.
Registration contact: Robert F. Meissner
RD 1, Kulp Road
Pottstown, PA 19464

IEEE Seminar on Software Testing
September 29-30 — Arlington, Va.
October 24-29 — San Francisco, Calif.
November 28-29 — Las Vegas, Nev.
Sponsor: Institute of Electrical and Electronics Engineers, Inc.
Registration contact: Susan M. Havranek
Standards Seminar Manager
IEEE, 345 East 47th St.
New York, NY 10017
(212) 705-7907

Strategy for Success in Data Processing: Project Management
Course which emphasizes management planning issues concentrating on the development center
September 29-31 — Washington, D.C.
Sponsor: Febish Associates, Inc.
Exhibit contact: Janis Manni, Manager Educational Services
P.O. Box 90020, Dept. 350
Houston, TX 77290
(713) 251-9726

Federal Computer Conference
Seminars, workshops, exposition for ADP managers & personnel
September 13-15 — Washington, D.C.
Washington Convention Center
Sponsor: Federal Education Programs
Registration contact: Linda Adler
Exhibit contact: Fred O'Keefe
(800) 225-5926

HP 3000 International Conference
Technical Conference on the Hewlett-Packard 3000 System/Applications
October 2-7 — Edinborough, Scotland
George Hotel
Sponsor: HP 3000 International User's Group
Registration contact: Europe — The Secretariat
031-229-7366
Registration contact: U.S. — Conference Manager
HP 3000 IUG
289 S. San Antonio Road
Los Altos, CA 94022
(415) 941-9960

COMPUSOURCE '83
Exhibits plus technical sessions reflecting latest advances in computer industry
October 5-6 — San Jose, Calif.
Red Lion Inn and Convention Center
Exhibit contact: Carol L. Reimer, Show Manager
Norm DeNardi Enterprises
Suite 204
289 S. San Antonio Road
Los Altos, CA 94022
(415) 941-8440

Great Southern Computer and Electronics Show '83
Comprehensive computer and electronics show
October 7-9 — Jacksonville, Fla.
Sponsor: Great Southern Computer and Electronics Show
Registration contact: Great Southern Computer and Electronics Shows '83
P.O. Box 655
Jacksonville, FL 32201
(904) 353-0418

Independent Computer Consultants Association Western Region Conference
October 7-9 — Marina Del Rey, Calif.
Sponsor: ICCA
Registration contact: Jim & Mane Petroff
DP Consultants
P.O. Box 85152 MB252
San Diego, CA 92138
(619) 268-4818

Northwest Colorado Computer Fair
Regional Micro Computer Trade Fair
October 8-9 — Steamboat Springs, Colo.
Strawberry Park Junior High
Sponsor: Computer Programmers & Users Club
Registration contact: Dr. Jim Dudley
Exhibit contact: Dr. Jim Dudley
Box 774200
Steamboat Springs, CO 80477
(303) 879-4203

Fiber-Optic Communications and Local-Area Networks Exposition
Featuring exhibition of products and services from leading manufacturers in the fiber optics and local-area network industries.
October 10-14 — Atlantic City, N.J.
Bally's Park Place Casino Hotel
Registration contact: Information Gatekeepers, Inc.
Suite 212
138 Brighton Ave.
Brighton, MA 02134
(617) 787-1776

Defense Computers-Graphics '83
International conference for the defense industry
October 10-14 — Washington, D.C.
Convention Center
Sponsor: World Computer Graphics Association & National Computer Graphics Association
Registration contact: Defense Computers-Graphics '83
Suite 333
2033 M Street, N.W.
Washington, DC 20036
(202) 775-9556

CADCON East '83
Engineering conference devoted exclusively to computer-aided design
Park Plaza Hotel and Exposition Center
October 11-12 — Boston, Mass.
Sponsor: Morgan-Grampian Expositions Group

Registration contact: CADCON East 83 Coordinator
Morgan Grampian Expositions Group
Two Park Ave.
New York, NY 10017
(212) 340-9781

System 1022/1032 Users Conference
Seminars, workshops, tutorials for our users
October 16-19 — Boston, Mass.
Hotel Marriott/Long Wharf
1105 Massachusetts Ave
Cambridge, MA 02138
(617) 661-9440

Texas Association for Educational Data Systems 1983 Convention
Convention with theme of computer literacy
October 16-18 — Dallas, Texas
Austin-Hilton Hotel
Sponsor: Texas Assocation for Educational Data Systems
Registration contact: Tom Hopper
Northside ISD
5900 Evers Road
San Antonio, TX 78238
(512) 618-8330

Strategy for Success in Data Processing Resource Management
Seminar which emphasies management planning issues concentrating on the growth, service and cost of the the current applications and information centers. **October 17-20** — Los Angeles, Calif.
Sponsor: Febish Associates, Inc.
Registration contact: George J. Febish
P.O. Box 90020, Dept. 350
Houston, TX 77290
(713) 251-9726

HP 1000 IUG Conference
Technical Conference on the Hewlett-Packard 1000 System
October 18-21 — Fort Worth, Texas
Fort Worth Hyatt Regency
Sponsor: HP 1000 International Users Group
Registration contact: Ted Varga
P.O. Box 1447
Provo, UT 84601
(801) 373-8150
Exhibit contact: Conference Manager
HP 1000 Internation User's Group
289 S. San Antonio Road
Los Altos, CA 94022
(415) 941-1943

Facts-'83
Automation for financial institutions
October 23-26 — Hilton Head, S.C.
Hilton Head Hyatt
Sponsor: Association of Information Managers for Financial Institutions
Registration contact: M.J. Hoogendyk
Exhibit contact: M.J. Hoogendyk
Suite 2221
111 E. Wacker Drive
Chicago, IL 60601
(312) 644-3100 Ext 773

Televent '83
Confersnce promoting understanding among leaders of telecommunications industry
October 23-25 — Montreaux, Switzerland
Maison des Congres
Sponsor: Televent USA
Registration contact: U.S. - Marianne Berrigan
Suite 1128
1120 Connecticut Ave., N.W.
Washington, DC 20036
(202) 857-4612

DEXPO/West '83
National DEC Compatible Industry Exposition
October 23-26 — Las Vegas, Nev.
Las Vegas Convention Center
Sponsor: Expoconsul International, Inc.
Registration contact: Steven Barth
Exhibit contact: Natalie Kaye
55 Princeton-Hightstown Road
Princeton Junction, NJ 08550
(609) 749-1661

SIZZLE/West
Seminar/Exposition for Info Industry Marketers
October 26-27 — San Jose, Calif.
San Jose Convention Center
Sponsor: The Sizzle Sheet
Registration contact: Doreen Goldberg
Exhibit contact: Doreen Goldberg
Project Manager
Sizzle Shows
150 Speen St.
Framingham, MA 01701
(617) 875-0013

Applefest/San Francisco
Apple-specific computer show
October 28-30 — San Francisco, Calif.
Moscone Center
Registration contact: Gerald Milden
Northeast Expositions
822 Boylston St.
Chestnut Hill, MA 02167
(800) 841-7000 or *(617) 739-2000*

Federal Office Automation Conference
Exposition, seminars, workshops on office automation
November 1-3 — Washington, D.C.
Washington, DC Conference Center
Sponsor: National Council for Education on Information Strategies
Registration contact: Linda Adler
Exhibit contact: Fred O'Keefe
P.O. Box N
Wayland, MA 01778
(800) 343-6944 or *(617) 358-5356*

INTECH '83
Conference addressing integration of information technologies and applications
November 1-3 — Chicago, Ill.
McCormick Place
Sponsor: National Trade Productions, Inc.
Registration contact: Mary Beth Gouled
National Trade Productions
9418 Annapolis Road
Lanham, MD 20706
(301) 459-6383

Automation Technology in Engineering Data Handling and CAD/CAM
November 2-4 — Monterey, Calif.
Sponsor: Automation Technology Institute
Registration contact: Juliann McPadden
Exhibit contact: Donna Davidson
P.O. Box 242
Pebble Beach, CA 93953
(408) 624-5892

IFMA '83 - The Electronic Connection
Annual tradeshow and convention of the IFMA
November 2-4 — Denver, Colo.
Fairmont Hotel
Sponsor: International Facility Management Association
Registration contact: IFMA
3970 Varsity Drive
Ann Arbor, MI 48104
(313) 994-0660

4th Annual San Diego Computer Fair
Exhibits and seminars for microcomputer users
November 5-6 — San Diego, Calif.
Sponsor: San Diego Computer Society
Registration contact: Sybil Allbright
(619) 278-4284
Exhibit contact: R E. Van Cleef
1151 Naranca Ave.
El Cajon, CA 92021
(619) 442-7967

Central Prime Users Meeting
Annual meeting and seminars for central region Prime Computer users
November 6-8 — Arlington Heights, Ill.
Arlington Park Hilton
Sponsor: Central Prime Users
Registration contact: Meg Lovell
Exhibit contact: Meg Lovell
c/o Waldner & Company
2311 W. 22nd St.
Oakbrook, IL 60521
(312) 789-0770

Information Exchange
Annual users conference
November 7-10 — Nashville, Tenn.
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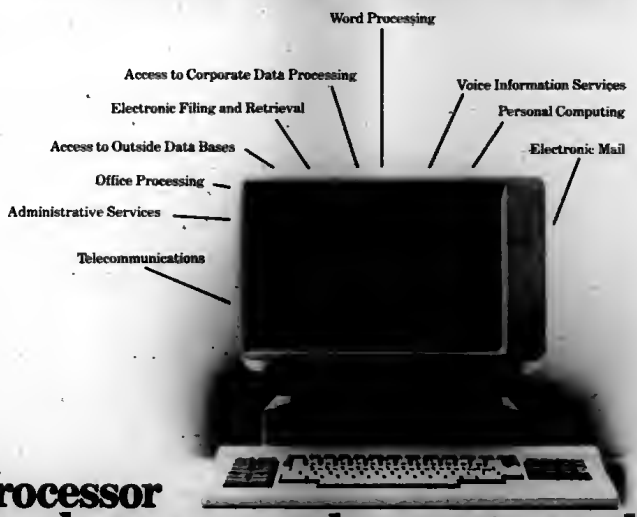

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